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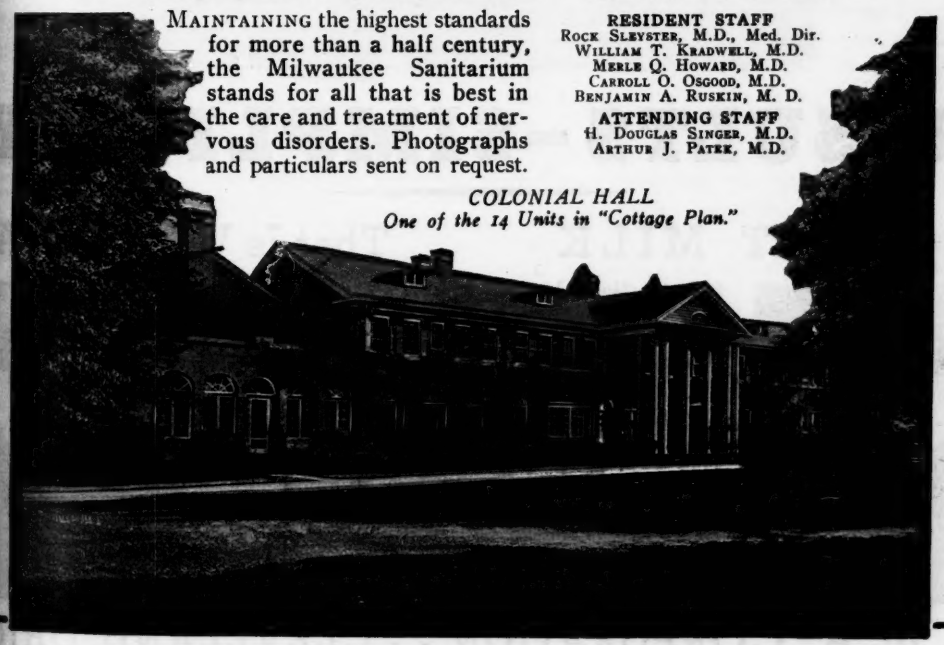

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Editorials

POLITICS PLAYS TOO LARGE A PART IN CARE OF THE INDIGENT

Propagandists for state medicine seem to think that they have the medical profession hoist by its own petard when citation is made and the accusation brought forth that the United States has nurtured "state medicine" for over a century through the establishment and maintenance of community, city, country or state hospitals or sanitariums for the care of the insane, of the indigent tubercular or venereal disease patients and of the general county charity hospitals for the indigent. State or county or community manufacture and distribution of vaccines, toxoids and biologics in general are also considered state medicine. To a certain extent this is true, to a certain other it is absolutely false. In the beginning, establishment of state financed institutions for the insane were a direct growth of the doctrine that the insane are criminals and as such should be confined in penal institutions. The especial prisons for the insane were for years national scandals the world over, and the devices for restraint of the violent ranged from simple fetters to monstrosities of torture. To punish the wrongdoer was the creed of the world and the mentally deranged went along with the rift. It is only about a hundred years since insane prisons were changed to insane asylums or hospitals. The care of the insane was not a competitive proposition, i.e.—it has never been a custom to hold the actual economic care of the lunatic an economic burden for the physician any more than it would be to compel the medical profession to finance prisons and reformatories, though their poor, if any, recompense plays a large part. History of institutions for the care of the mentally deranged have not been free from abuse or scandal or ineptitude during the years of their political control, and with a few exceptions today, state governments can not be proud of the treatment accorded their insane charges. In

those instances where the hospitals for the insane are under *medical* rather than *political* control, the results have been much more favorable. As a matter of fact it will be a happy day for the afflicted insane when control of all institutions for these unfortunates, whether financed by tax payers or personal charity are turned over completely to the medical profession. The indigent insane are public charges and even more a public risk, because of their utter irresponsibility and other manifest menaces arising from their disease.

The recent building of government hospitals for the hospitalization and treatment of World War veterans has even now proven the indubitable economic waste and doubtful scientific value of such procedure. This is state medicine and state medicine accepted with protest and without superiorly beneficial eventualities. There is no question but that, try as the Army and Navy may, politics manages to stir up entirely too big a spoonful when it comes to control of these institutions for which the taxpayers pay in gobs and the veterans do not receive any spectacularly unusual care. By the very nature of things, they can not. In the government hospital situation is one of the very best demonstrations of the burdens of state medicine. Incompetency is not laid at the doors of these institutions but that is more because of the efficient medical service of United States Army, Navy and Marine Medical corps than because the government is running the hospitals.

Epitomized it might be said that while the forms of state medicine mentioned have been functioning with more or less pain for a century or so there is no evidence to the contrary and a great deal to uphold the theory that even these examples would function far better if in the hands entirely of the organized medical profession with a few state endowments for medical and surgical and scientific skill and a few less to maintain unskilled or partially skilled non-medical labor at the expense of the mentally ill, or the disabled heroes of the world war. Nor is there any question but that the medical profession functioning through the familyl physician should have charge of and should supervise health examinations of every nature from the pre-school child, up through the ranks of the public schools and also of adults; as well as the administration and distribution of vaccines, toxins and biologics and the authorization and supervision of all laboratory tests for existence of disease when such is indicated.

Corporations practicing medicine, lay corporations at that, are another instance of state medicine attempting to foist itself upon the public. No matter what their initiative principle, their inevitable trend is to hit the taxpayer in one way or another. It is true that there is an inequitable distribution of medical cost at present. But the balance will never be regained by increasing taxes and decreasing taxpayers. Every doctor put out of practice because his patients are cared for by taxes to which he himself pays and pays, makes one less taxpayer to pay the taxes by which those patients are cared for. And whether the corporation practicing medicine is a free or part-pay-lay-controlled clinic, or a state subsidized hospital, or a lodge, or a contract insurance group, or an employment center coterie, the circle runs the same.

THE HIGH COST OF MEDICAL CARE GOES TO EVERYBODY BUT THE DOCTOR

Upholding the continuous contention of this journal that the money spent in "the high cost of medical care" goes to everybody but the doctor please note this quote from the *Journal of the Missouri State Medical Association* in which Dr. E. Lee Miller of Kansas City, Mo., remarks:

"That it costs too much to be sick is true. The sick services that can be thus indicated are the high cost of hospital and nursing service which we all admit is at times necessary but where charges have become excessive. Nearly every physician can subscribe to an experience like this. The patient is a cholecystectomy candidate and wants and needs some careful watching, so a trained nurse is called. The period of convalescence is two weeks. A private room costs $84; operating room, $15; laboratory, $5; drugs and dressing, $15. Two nurses at $42 per week each cost a total of $168; so it is plain to be seen that if the patient is a very sick man it costs him $287 before he has one penny available with which to pay a consultant, an anesthetist or surgeon. Let us say that the surgeon charges $150; the anethetist $15 and the consultant $50 for a trip away from home to the hospital. *Then the cost of all three of the doctors is less than the cost of the nurses*

alone! And can any layman even dare believe that the services of the physician are not the most valuable contribution to the patient's welfare? And what manner of patient is it who *comes in from the farm to town and to a hospital*, who has $452 available for such a financial outlay? *Could even a foundation indict the* doctor for overcharging when with $287 spent before the doctor's fees are even considered, the doctor's charge is less than the nursing expenses? Hospital cost is high and nursing service *with the now adopted twelve-hour duty is* being paid a sum that depression patients can not stand long. *It is true that the nurse is* invaluable in many cases but in times like these her charges are severe. The physician gets no remuneration until all these other service obligations are met. How many people in the average *community can meet a cost of $452 without* difficulty? The doctor is only one-third of the cost of being sick in a hospital and usually the last third to be paid. It is not the doctor's charge that accounts for the high cost of being sick, and at present he receives only one-third of the cost. His services are easily worth two-thirds of the cost of being sick. Certainly he is worth as much to a patient as a nurse. If nursing and hospital charges continue to mount, the physician must eventually find some other type of service to meet his patient's needs. This is a grave problem that must be handled by the physician of tomorrow. He should not be further limited by law to regulate his already too meager compensation for the value of the services he performs cannot be eclipsed. The medical profession welcomes aid in a fair solution of this problem but reasonably resents the indictment that we are overpaid."

PHYSICIAN SUMMONED FROM HIS HOME ON A PRETEXT OF MERCY AND MURDERED

"Toujours pret et toujours fidele!"

"Always ready, always faithful!"

Unflinching devotion to this inexorable motto of all ethical physicians caused a few months since the brutal murder by a band of hoodlums of a respected and valuable member of the medical profession, and a sterling citizen.

It was responsible, too, for the "stick-up" of several other doctors.

With one of the most rapacious, brutal and degenerate "gangs" that has ever come to the attention of the Chicago police, and the average age of which was insufficient to permit them to cast a ballot, *the most popular victims were members of the medical profession.*

"Doctors are a cinch," the ringleader told the police who listened appalled and horrified to the revelations of the gang. "Yea—doctors always come when they are called and they never mind where they are told to go. Easy to get them to go to the sticks and way out in funny places. *We could do 'em up good there.*"

Yes, doctors always come when they are called. No, doctors never object to going to out of the way places. They are a trusting credulous crew, with hands ever eager to aid, ears ever open to hear, and feet ever waiting to rush to the help of humanity. Doctors are never "choosy." Doctors are always on the job. Doctors, so those young punks found, and as millions of ailing humanity has discovered hear and heed a summons without captious cavilling as to source or objective. Where there is need *there* is found the capable conscientious physician.

What a travesty of reward fell to the lot of the victimized and murdered Dr. Silber C. Peacock!

Summoned from his home and fireside, with his wife, his baby daughter, and the imminency of another expected child, he answered as earnest medical men have always done and always will do, the call for help to a "sick child." Next afternoon his murdered body was found in an isolated neighborhood. In the vicinity of where the call had come, nothing like a sick child or the address had ever been heard of.

Was this servant of humanity rewarded by the faith of his fellowmen?

HE WAS NOT.

With the exception of the medical profession, his colleagues in the crusade of mercy, this doctor was by intimation accused of practically every unseemly action in the calendar from malpractice and mayhem to illicit intrigue and actual dishonesty.

Theory after theory was advanced by press and public. The heartbroken family and friends were spared neither inquiry nor insult. The worst possible construction was put upon the most innocent action by every possible medium or means.

Dr. Peacock's confreres alone stood staunch

and true. The North Shore Branch of Chicago Medical Society offered a reward for the apprehension of the murderer *and not for an instant did their faith waver.*

Trapping of the misguided young criminals responsible for the slaying of a man who had saved many lives, alleviated much suffering and was still, according to the years of his profession, a very young man, came through police activity in the way of yet another misdemeanor. Disappearance of two young girls, known to have associated with the youths, brought the "gang" into the police station. At a subsequent show up of criminals, several doctor robbery victims identified the gang. An inspired police officer remarked casually, "What about the Peacock murder," and saw one of the youths blanch and quiver for an instant. To clever officers, as were those in charge of that inquiry, the rest was easy. The truth came out.

"Toujours pret! Toujours fidele." (Always ready, always faithful!) The motto stands for the faithful, loyal confreres of the murdered physician as well as for that strict adherence to creed that sent Dr. Peacock to his death, because, "Gee, doctors are easy. They always come when they are called."

NOW IS THE TIME WHEN PHYSICIAN'S COUNSEL IS NEEDED IN LEGISLATIVE BODIES AS NEVER BEFORE

One of the most pertinent and able bits of medical literature scanned in many a day is that written by the senator from New York, Dr. Royal S. Copeland, and published in a recent issue of *"Medical Economics."*

Quoting from Dr. Copeland a few interesting excerpts are:

"Are the vast social and economic problems which the country faces today those which can be met best by the average politician or legislator?

"My answer is, No! In the face of the present dilemma, one doctor in politics is worth as much to the country as a dozen lawyers!

"We physicians must render more public service than in the past. We must use our knowledge more and more against those all-too-prevalent methods of living which make for unhealthful conditions.

"This is a time when every physician must be a preacher, spreading the gospel of how to live properly under adverse circumstances. This is a time, too, when his counsel is needed by legislative bodies as never before.

"Back in what we may call the 'normal' days, quacks, charlatans and dishonest advertisers of 'cures' were, of course, with us. We still have them. However, they now constitute a much larger menace to honest medicine and the public welfare.

"When people are despondent they are inclined to grasp at any straw of encouragement. This means that they are all the more ready to listen to and patronize the unethical, not to say openly fraudulent, species of practitioner.

"Granted that it is the task of the ethical physician to keep medicine honest, one of the best possible ways for the profession to guard against the continued inroads of the charlatan is for its members to enter into politics—if for no other reason than to keep these fellows out, and thus prevent their lowering the existing legal bars which to some extent at least keep them under control.

"If able physicians would be willing to sacrifice their private practices, even temporarily, and serve in legislative bodies, I am confident that their very presence there would be a guarantee not only of a better deal for the medical profession, but for the public at large.

"And now let us turn to a matter on which I am questioned by medical men everywhere I go. What is the future of the medical profession in this country? One of the administrators of public relief in the State of New York has told me recently that in this wealthiest state in the Union there are 500,000 families on the dole.

"This means 2,000,000 citizens of New York State are dependent on relief funds for house rent, fuel, food, clothes and medical attendance. . . . Heretofore the highest average (number of unemployed in the United States has been 2,500,000, but we have had now as high as 15,000,000 persons out of work. . . . Experts tell me that there are still 10,000,000 unemployed persons in this country.

"Appearing before the Senate Appropriations Committee, of which I am a member, Harry Hopkins, director of the Federal Emergency Relief Administration, declared not long ago that

Congress must evolve some plan for *permanent* relief of at least 10,000,000 of our people. This is truly a deplorable situation, one that should engage the sober thought of every physician.

"My mail has been filled with letters from doctors. Because I happen to be a medical man, they apparently prefer to write to me, rather than to their own senators. In this way I get at first hand many a recital of their particular woes and tribulations.

"One physician informed me the other day that he had not received one dollar in cash for the past six weeks; that he had been taking his pay in farm products, eggs, chickens, butter, sides pork, and so on. With a large family of his own to care for, this doctor, typical of large numbers, is faced by the imminent peril of economic and social disaster.

"Hundreds of doctors, in fact, would be in bread lines themselves except that they are administering to the vast army of the unemployed through federal relief agencies."

THE 1936 ANNUAL MEETING

The preliminary program for the 1936 annual meeting of the Illinois State Medical Society appears in this number of the ILLINOIS MEDICAL JOURNAL. The meeting will be held in Springfield on May 19, 20, 21. All sessions will be held in the spacious Knights of Columbus Club Building, and all exhibits will likewise be displayed in the same building.

The Committee on Arrangements selected from the membership of the Sangamon County Medical Society, has been working for months to get the best possible arrangements for a successful meeting. The Sangamon County Society has had much experience in arranging annual meetings for more meetings of this Society have been held in Springfield than elsewhere.

The officers of the five scientific sections, and also those for all special meetings in connection with the annual meeting have carefully prepared their respective programs so that they will appeal to the entire membership.

On Tuesday morning, May 19, the special meeting of the Pediatricians, Obstetricians and Gynecologists, the Woman Physicians, and the annual Secretaries' Conference will be held in the Knights of Columbus Building.

The general opening meeting will begin promptly at 1:00 P. M. Tuesday, and at 1:30 the annual Oration in Medicine will be delivered. The remainder of the afternoon will be devoted to individual meetings of all sections.

On Wednesday and Thursday mornings, there will be a joint session of the sections with programs arranged which will appeal to the members of each of them. These joint sessions have been carefully arranged and the speakers and subjects have been well selected.

The first meeting of the House of Delegates will be held at 3:00 P. M. Tuesday, and at 8:30 A. M. Thursday, the second meeting of the House will be held. All annual reports, and many matters of interest to the delegates and component societies will be brought up for their consideration.

The annual President's Dinner will be held at the Abraham Lincoln Hotel on Wednesday evening, and the committees in charge of this interesting function are planning for a big attendance and they give every assurance that it will be an appropriate tribute to a most capable executive.

The Committee on Scientific Exhibits has procured the largest display in the history of the Society, and these exhibits will be of much interest to the entire membership. A variety of subjects has been selected for these exhibits this year, many of them being prepared primarily for the 1936 annual meeting.

The usual number of technical exhibitors will be on hand to show the physicians of Illinois many of the newer developments of the year in various forms of therapy.

The official program will be published in the May ILLINOIS MEDICAL JOURNAL together with a considerable amount of informative data pertaining to the meeting.

SPRINGFIELD

Springfield, Illinois, "the home of Abraham Lincoln", the capital of Illinois, is to be the meeting place of the eighty-sixth annual convention of the Illinois State Medical Society. Springfield has many advantages for such a meeting and a large attendance is expected. The former home of Abraham Lincoln is rich in the history of a critical period in the affairs of the United States and many shrines dedicated to

Lincoln have been preserved for tourist inspection.

Lincoln moved to Springfield about 1837 from New Salem and became the law partner of J. P. Stewart, maintaining the closest possible personal, professional, and political connection with the city until the time of his assassination at the close of the Civil War. The only home that he ever owned is open for inspection at Eighth and Jackson Streets. In Oak Ridge Cemetery is a splendid monument recently remodeled and reconstructed which houses an impressive museum of Lincoln relics and Lincoln history. The lower part of this monument constitutes the mausoleum containing the remains of the Great Emancipator and members of his family.

Although Springfield is particularly noted for its wealth of Lincolniana and his associations will forever color the future progress of the city, there are many other features of decided interest to visitors. The State Capitol, completed in 1887 at the cost of four million dollars, is the most prominent building of a well-planned state group. It is constructed of gray limestone and granite in a classic type of architecture and is surmounted by a massive dome 361 feet high. Contained in the state group of buildings is the Centennial Building begun in 1918 to commemorate the one hundredth anniversary of Illinois' birth as a state. It houses the administrative offices, the famed hall of flags, an efficient museum, and the collection of the State Historical Library and the State library system. Also in this group is the Illinois Supreme Court Building, and it is on an adjacent site that the new Armory and Archives Building will be erected. Other places of interest are the Federal Building, County Court House, City Hall, K. C. Building, Elks Home and the Lincoln Library.

Of particular interest from many points of view is the recently completed Lake Springfield. This is an artificially constructed lake some eighteen miles in length with a storage capacity of over twenty-one billion gallons of water. With the cooperation of the different committees it is hoped that much of the social activity of the annual meeting will focus about Lake Springfield.

The city has two large hospitals, St. John's and Springfield, and homes for the aged and for children. It has 650 acres of parks, boulevards and playgrounds, providing ample facilities for tennis, swimming, baseball, golf, and other sports. Springfield has necessarily become a focal point in the concrete road system of Illinois, a factor which should encourage a large attendance. In addition, its multiplicity of railway lines and electric lines make it peculiarly accessible from some distances.

VITAMIN "E" IN SPONTANEOUS ABORTIONS AND INVOLUNTARY STERILITY

Dr. E. M. Watson, London, Ontario, in the *Canadian Medical Association Journal,* February, 1936, page 134 is abstracted in the J. A.M.A. March 28, 1936, as follows:

Clinical Experiences with Wheat Germ Oil (Vitamin E).—Watson prescribed wheat germ oil to sixty-five patients respecting whom spontaneous abortions, threatened abortions or involuntary sterility constituted the principal abnormalities. The patients have been classified into four groups: group 1, pregnant women who had experienced two or more spontaneous abortions previous to receiving wheat germ oil treatment (habitual abortion); group 2, pregnant women who had experienced one spontaneous abortion previous to receiving wheat germ oil treatment; group 3, cases of threatened abortion, and group 4, women who sought medical advice because of failure to become pregnant (sterility group). The patients included in groups 1 and 2, with but two exceptions, were pregnant at the time the treatment with wheat germ oil was started. The purpose of the treatment was to favor the continuation of the pregnancies. The patients in group 3 received the oil only after the onset of the symptoms of threatened abortion, and its administration was a part of the treatment for that condition. Those in group 4 were not pregnant at the time the oil was used, although several had been pregnant previously. The object of the treatment in these cases was to facilitate impregnation. In the majority of the abortion and sterility cases no therapeutic measures except the use of wheat germ oil were instituted. But the patients with signs of threatened abortion were subjected to the usual management for that condition and received wheat germ oil. Of eleven patients who had sustained from three to fifteen spontaneous abortions prior to the exhibition of wheat germ oil, nine went to term and were delivered of healthy

living children. Six of the patients under this regimen completed a pregnancy for the first time. Of the seventeen wheat germ oil treated patients, each of whom had had two spontaneous abortions, twelve gave birth to healthy living children after the use of the oil. In five cases the pregnancies were interrupted by spontaneously occurring abortions. Of nine treated patients, each of whom had experienced one previous spontaneous abortion, eight gave birth to healthy, living children. In the ninth one abortion took place a short time after the use of the oil was commenced. Fifteen patients were treated for the symptoms of threatened abortion, the majority after bleeding had begun. In eleven of these the pregnancies continued uninterruptedly to terminate in natural deliveries, but in four instances the abortions became inevitable. Thirteen non-pregnant women were given wheat germ oil with a view to facilitating impregnation. Six of these had never conceived and therefore constituted examples of primary sterility. Each of the remainder had been pregnant at least once, which placed them in the category of so-called secondary sterility. Seven had had one or more abortions, but only one woman had given birth to a living child. Pregnancy did not ensue in any of the patients in this group. Conception occurred in two of Vogt-Möller's four sterility cases and living babies were delivered. The experiments lend some support to the surmise that vitamin E is a factor in the advancement of pregnancy to a natural termination.

DOCTOR WILLIAM H. MALEY CANDIDATE FOR CONGRESS

Dr. William H. Maley, Galesburg, Illinois, is a candidate for Congress on the Democratic ticket in the fifteenth district.

Dr. Maley was a charter member of the Knox County Medical Society and has been an active member ever since. For eight years he represented the Knox County Medical Society as delegate to the Illinois State Medical Society.

He is a graduate of Knox College and Brown's Business College of Galesburg, and the Medical Department of the University of Chicago, known as Rush Medical. He did post graduate work in Berlin and Vienna.

He was one of the first medical men to enlist in the World War. He entered as a first lieutenant and served his country for over two years. He was promoted to rank of major and was chief of the surgical service for a base hospital in France.

He has always taken an active part in public affairs and has held many positions of trust and responsibility. At present he is member of the Galesburg City Council and has served as councilman for over twenty years.

He is an active member of the American Legion, the Veterans of Foreign Wars and the 40 and 8. He is an active member of the Knox County Medical Society, the Mississippi Valley Medical Society, the Illinois State Medical Society, and the American Medical Association.

He is at present organizer for the National Union for Social Justice—District fifteen. In medical matters Dr. Maley has been one of the staunchest advocates of organized medicine.

BLADDER ABNORMALITIES DUE TO INJURY OF MOTOR PATHWAYS IN NERVOUS SYSTEM

By means of an air-water manometer and recording tambour Lloyd G. Lewis, Orthello R. Langworthy and John E. Dees, Baltimore (*Journal A. M. A.*, Dec. 28, 1935), have made graphic records of the behavior of the detrusor muscle during bladder filling. The bladder muscle characteristically responds to stretch stimuli, and important information can be obtained by observing and recording waves of bladder contraction. Patients were studied who suffered either bilateral or unilateral pyramidal tract injuries or had lesions of motor tracts in the spinal cord. With release from cortical control, the stretch reflex is hyperactive. The bladder empties precipitously with a small volume of fluid. When the motor pathways from the midbrain are injured bilaterally along with the corticospinal tracts, the waves of bladder contraction are frequent but of small amplitude. They are ineffective in emptying the bladder. A study of contraction waves of the muscle during filling is of aid in forming an opinion of the efficiency of a bladder with damaged innervation.

OPHTHALMOSCOPIC SIGNS IN THE PRE-APOPLECTIC STAGE

Disease of the retinal vessels, not of local origin, is not an absolute criterion of disease of the cerebral vessels; it simply furnishes a presumption in favor of its existence. But, in the presence of a retinal arteriosclerosis not of local origin, we are justified in concluding that a coexisting lesion is probably present in the cerebral vessels; also that we are frequently able to diagnose ophthalmoscropically a retinovascular disease which is an important sign of cerebral arteriosclerosis, this being a direct menace to the patient's life.—Dr. M. Cohen, of New York, in *M. J. & Record*, Aug. 17, 1932.

MEDICAL ECONOMICS

Edited by the Committee on Medical Economics
of the
Illinois State Medical Society
E. S. Hamilton, M. D., Chairman
Kankakee, Illinois

C. G. Farnum, M. D.
R. K. Packard, M. D.
J. S. Templeton, M. D.
C. E. Wilkinson, M. D.

H. M. Camp, M. D.
I. H. Neece, M. D.
C. B. Reed, M. D.
C. S. Skaggs, M. D.

Address all letters and communications to the Chairman.

During the last meeting of the Council of the Illinois State Medical Society there was brought to the Councilors concrete evidence that the Social Security Act is no longer a theory but is actually being put into effect in Illinois as well as other states of the union. As might have been expected considerable pressure is being brought to bear on the Directors of Public Health of the various states by the authorities in Washington to dictate the nature and the extent of the work to be done in medical fields. Again, I repeat that the State of Illinois is fortunate in having as its Director, one who appreciates the problems of the medical profession, and while anxious to cooperate with his superiors, does not want to do anything which will in any way injure the medical profession either individually or collectively now or in the future. As a result he is consulting with a special committee of the Society in regard to every new program suggested before he puts the same into effect. This may have a tendency to slow up the program in this state, but surely it will help to avoid the dangers, inherent to many of the projected plans. Surely the members of the medical profession in Illinois should cooperate with him in every way possible and should rally to his support whenever he is subject to criticism as he may be for his kind consideration of the profession.

According to the best information available at this time the plans for the ending of relief under the Illinois Emergency Relief Commission on May 1 is to be carried out on schedule. Already, many counties have gone on cash relief. This in so far as it includes money for medical care will further complicate an already unsatisfactory condition. The recipients of relief during the past two years have become so accustomed to demanding medical care with the same abandon as food and the Doctors have been most gracious to furnishing the same at reduced fees. Now these same people will continue to expect medical care. With no money allotted for this particular emergency, the prospect is that they will not have any money to pay for the same. Of course, there is in theory a County Relief Unit in each county, but the general impression seems to be that these units are poorly organized and with such limited funds, that they will be totally unable to cope with the problems which are sure to arise both before and after May first. It is up to the medical profession to be prepared for these emergencies and this preparation can only be arrived at by definite planning. No organization can take the place of the County Medical Society in estimating the local conditions and problems, so that the proper decision as to the method to be employed can be arrived at. Failure to meet the problems promptly on their appearance will result in the wrong kind of precedents being established by both the indigent and the local relief units. A definite firm stand on the part of local medical men will soon convince both of them that a reasonable solution of the problem can and must be made at the beginning of the new plan if the medical profession is to be expected to do at least its share. Lets have plenty of backbone at this time and forget petty differences of opinion.

We regret that there has been a delay in the presentation of the papers of the Northwest Regional Conference. Some of the writers of the papers do not wish to have the same printed in the Journal, but as many as are willing will have the papers published in the ILLINOIS MEDICAL JOURNAL in the next few months, together with the discussion. By this method, every member of the Illinois State Medical Society will have the opportunity to read the same. The number of requests from men from out of the state has been very great and by this method we will be able to fill their desires.

It is expected and hoped that a portion of the program at the annual meeting in Springfield in May will be allotted to some of the problems of an economic nature. At present the definite

program has not been printed and it is impossible to refer the members to the exact time of these meetings. It is to be hoped that those of you who are interested in this subject, and we hope that more and more of you are becoming so, will read over the program carefully and find out when the meetings are to be held. In the May issue of the JOURNAL we will attempt to call the attention of the readers to the subjects of particular interest on economic subjects.

This column takes no interest in partisan politics. However, this is a time when it is well to determine the stand of the candidates for the State Legislature on medical matters. This can be accomplished either as individuals or as representatives of the County Medical profession. If there is any time that a definite stand on such matters can be obtained from politicians it is when they are anxious to be elected. Surely, it is not beneath the dignity of the medical profession to make this effort to safeguard the interests of the medical profession in Illinois.

Dr. J. S. Templeton presents an article on "The Challenge", immediately following this one. It is most interesting and will give us all cause for reflection and thought. I hope that you will read the same. Also, the Committee on Medical Economics would appreciate hearing from the members of the Society throughout the state as to their interest in this column. Please feel free to inform any member of the Committee or your Councilor as to your feelings in regard to the same and if you have any suggestions as to improvements, let them know.

E. S. HAMILTON, M. D.,
Chairman of Committee on Medical Economics.

THE CHALLENGE

Organized Medicine in the United States of America is accused of charging too much for service to the public and of not rendering necessary service to our citizenship. Certain foundations and citizens with socialistic ideas complain that the middle class cannot afford to pay the price of proper medical service and are not being cared for as well as the indigent and richer class. Therefore, they had a Social-Security Act passed with provision for a beginning of medical service to humanity that will be paid for by taxes, which are paid by the public. Some of these organizations have for several years been spending money for investigations by committees, composed of laymen and a few doctors who are in sympathy with the idea of State Medicine, and now we are facing the challenge to show why they should not establish clinics and other forms of State Medicine in communities they consider the most fertile for gaining their objective.

It is not citizens of the middle class that are clamoring for this change. It is not the fellow that pays the taxes. It is social service workers and those who stand high in the political world who hope to obtain gain for themselves. They pretend to see the need of revolutionizing our medical setup and practices. What are we as a profession and individuals doing about it? No doubt many thought, like myself, until recently, that it was something far away in the future. But you must realize that in the passing of the Social-Security Act, we are brought to face State Medicine now.

Will we meet the challenge with determined spirits and stout hearts, or will we go about our business expecting the Lord to take care of us and the common people? As for myself, I cannot do the latter. I was born fifth of a family of eight children, taught the common children four years in public schools, and have cared for the medical needs of the common people more than thirty years. Hence my claim to qualify as one of the common people and know their needs. These contacts and experiences tell me that State Medicine will not correct the mistakes of medical service. We do not, like our opponents, believe that our work is all perfect. We are striving day by day to improve it. Statistics, health and death records prove that we are succeeding. We should not stand by and allow our individualism or the principles of our practice of the healing art to be taken away from us.

My eyes were opened while listening to a debate on State Medicine recently. Not a man or woman was quoted favoring it that had as much experience with the medical needs of the common people as the average practicing physician. Yet they are telling us how we should do our work. They extolled the medical profession, yet impressed the audience that we are poor business men. Some of us are. What profession is not afflicted by having some of the same drones? They claim we are handicapped by having to look after our business interests,

in other words, to finance the family. They worry about the doctors who do not collect over fifteen hundred dollars a year. At the same time they rave about our regimented school system, and how successful it is. What per cent. of our teachers are paid more than fifteen hundred dollars a year? Is the teacher able to go through his day's work without financial worry?

The regimented school teacher calls twenty-five or thirty children together and gives them all the same task. Do these brain trusters think the physician could do the same thing? Supposing we should find a majority of a group of twenty-five who needed their tonsils removed and proceed to complete the work for the entire group, that would be regimented State Medicine. Our regimented school system is not what we or our chidren need.

Children are not all alike, yet they are given practically the same training. Individual thought and care would be much better for ninety per cent. of them. I am not finding fault, but they have brought our schools into the argument. How long has it been since seventy-five per cent. of the teachers of Illinois were wailing about poor, unpaid salaries. Many of our teachers are with us, but one I recall having heard talking for State Medicine. He was squawking about having to pay fifty dollars for removal of his child's tonsils and at the same time was drawing three thousand dollars per year. Our schools stand well as compared to those of other countries, so let them alone, and fight to keep them from getting further into the dirty mire of politics.

In these debates there is not a single municipality or government quoted as having made a success of State Medicine. They would plunge us into unknown seas to sink or swim. Did the government make a success of directing our railroads? No. They have charge of our gasoline from the time pipes are put into the ground. Do you know that we are paying forty-five cents tax every time we buy a dollars' worth of gas? Yet we do not get perfect gas. Only recently one of our physicians attempted to care for a maternity case ten miles from town with the thermometer hovering around zero. Eight miles out his gas line was blocked by water in his gas, and his patient went through her ordeal without a physician, because of imperfect government controlled gas. If the government cannot give us good gas, can it give us good medical service? Here is another example of government care and control.

A child was brought into our town three hours after eating forty or more cold tablets, enough acetanilid to kill five children of its size. Its stomach was washed with but little results. One ounce of castor oil was given, and an enema an hour later caused the child to pass the pills, some of them still retaining their red coating. Four hours in the child's stomach and bowels, but so indigestible that the child had not absorbed enough to do it more than slight harm. Imagine the public paying their good money for pills so hard to digest they could do no good. Remember patent and proprietary medicine are made and sold under the direction of the government.

Instances are without number where even our government, the best and greatest in the world, has failed to give service equal to that of the individual.

When speaking of government control, I have reference to federal control rather than state. When speaking of state control, I have no reference to state rights, but rather to individual rights. There is no question but that the farther you make the center of control from the recipient you increase the disadvantages of the individual service.

We have in the state of Illinois, and in all others, as far as I know, a State Department of Public Health, which does not control the practice of medicine but has charge of and the responsibility for preventive medicine. When speaking of this Department, I do so, knowing that we are not unanimous in our opinions of the duties of our Department of Health. However, our profession has worked with the Department of Health in the state of Illinois for many years. Regardless of our differences of opinion, we have had wonderful results, and the profession has done itself great credit bringing about results with the assistance of our Health Department. I am not inclined to quote a lot of figures. A few are all that is necessary to convince any fair minded person that the prevention of disease has not been neglected, as charged to us. In Illinois in 1913, a little more than twenty years ago, scarlet fever, diphtheria, measles, whooping cough, typhoid, and smallpox were responsible in the one year for 4,148 deaths.

The same year, 1913, there were 418 deaths attributed to homicide. Twenty years later, during the year 1933, the same contagious diseases, plus poliomyelitis, caused the death of but only 688 persons, while murder or homicide caused 836, just twice as many as in the year 1913. These figures are conclusive evidence that the Department of Public Health and the medical profession have worked hand in hand these twenty years. Time forbids my referring to many other accomplishments of the joint service rendered the people of Illinois. Our directors of Public Health for several years past have been able, conscientious, men working in full accord with the aims, objectives and goal of the medical profession. It is our duty as medical men to support in every possible way our Department of Public Health in their effort to stamp out all preventable diseases. Diphtheria, smallpox, and typhoid fever will soon be in the ancient history class, and they are disappearing much faster than they could be made to do under government political control of medicine.

The Social-Security Act recently passed provides taxation for the care of maternity cases and crippled children. As for maternity work the medical profession has been giving special attention to it for the last fifteen years. We can stand help, of course, but are not asking for financial aid from the federal government, and above all do not want any federal dictators telling us how, when and where to do things we know much more about than they do. Possibly in times past we failed to give the mother and new-born baby the attention they deserved. However, our record of improvement is better than in any country under federal control of these important matters. As for crippled children we have thousands of men and women taking an active interest in their welfare and giving every possible relief for this class of unfortunates. Women's Clubs, Rotary Clubs, Lions, Kiwanis Clubs, and Masonic, Elks, Odd Fellows and many other organizations as well as the many millions of church members who are acting because of a personal interest in the unfortunate. Not only are the crippled benefited, but a Christian, charitable spirit is engendered in all who have a part in this great work. Could the state possibly do any better by our unfortunates, give them any better care, or show them any more attention or kindness than they are receiving today? The training of our citizenship in the spirit of philanthropy and human kindness is a vital necessity to the enduring worth of our nation. Shall this important matter be turned over to hireling who will naturally look upon this task with the view to extract the filthy lucre from funds intended for the afflicted rather than the alleviation of suffering?

We have had enough experience with government controlled medicine since we began working with medical relief. In the first place, while the federal government has had control there has been a great difference of regulation in various states. Kansas, for instance, allowed one dollar per month for each family, while in Illinois we were given but half as much. Sufficient money is not allocated for a month. Usually it lasts less than half, so we physicians having worked the first part of the month for half pay were compelled for humanities' sake to care for the sick the last half or more for nothing. That to us seems to be a fair test of what government controlled medicine would be. We are promised more income under State Medicine, and the common people are promised cheaper service. How can that be done when the tax collector will have to be paid, the case worker paid, and the secretary or director be paid? Imagine dragging the sick to medical centers with a sub-zero temperature prevailing. Imagine the expense of hunting up the sick and afflicted and compelling them to come into such a center for treatment. Besides all the inconsistencies mentioned, the sick would be robbed of their inalienable right to choose their own physician. Regardless of how much one physician might know about a patient's constitutional peculiarities, he would not always be allowed to treat the case, and what would be the result when it would often occur that physicians would be changed every day?

Medicine, like many other things, requires individual thought, individual contact and individual responsibility to reach its highest and greatest degree of efficiency.

To you, men of the profession, I appeal. You know that regimentation in medicine will not benefit the service. You know that government control will add confusion to our already difficult medical problems. The common people, the advocates of government control worry about, will pay more and receive less. Preventive

medicine will be retarded in its usefulness. There will be less incentive to delve into the mysteries of scientific medicine. This exploitation of idealistic fancy is a step of retrogression rather than one of progress. The vast difference between idealism and the practical application of its tenets is apparent on all sides. We may be approaching the millennium of perfection in all lines of professional life, but prophets of the new order are confronted daily with errors in calculating our nearness to the goal.

The mirage of delusion has made itself a reality in too many experiments, industrially, socially, and morally. These are days for serious thinking and careful weighing of the new versus the old. "Be not the first by whom the new is tried, nor yet the last to lay the old aside", has been a maxim adhered to by the medical practitioner many years.

J. S. TEMPLETON,
Councilor Tenth District.

DR. W. D. CHAPMAN

WHEREAS, One who was deeply beloved by us all has gone from our midst, never to return, therefore be it

Resolved, That while we deeply deplore the death of our friend and husband of our dear President, Dr. W. D. Chapman, we rejoice in the fact that we were privileged to enjoy the boon of a friendship, the memory of which shall abide with us always.

Resolved, That to his family we tender our sympathy in their grief and loneliness, and the assurance of our appreciation of what his loss means to all who knew him.

Resolved, That as members of the Board of the Woman's Auxiliary to the Illinois State Medical Society, we transmit a copy of these resolutions to his family with the expression of our deepest and most sincere sympathy, and that these resolutions be inscribed upon the records of this meeting.

Mrs. Nelson Percy—2nd Vice Pres.
Mrs. I. F. Foulon—Rec. Sec.
Mrs. F. P. Hammond—Pres. Elect.
Eva Packard.
Mrs. Lucius Cole.
Mrs. A. H. Brumback.
Mrs. Carl A. Hedberg.
Mrs. J. P. Simonds.
Mrs. H. B. Henkel.
Mrs. E. G. Beatty.
Mrs. M. L. Hole.
Mrs. D. H. McCarthy.
Mrs. J. E. Reisch.
Mrs. E. R. Steen.
Katharine S. Bartling.
Mrs. H. M. Camp.
Helen Raim, Treasurer.
Maude A. Wolfer.
Mrs. P. R. Blodgett.
Mrs. Imas Rice.
Mrs. E. S. Allen.

EDUCATIONAL COMMITTEE REPORTS

Progress in March

SPEAKERS BUREAU:

82—Doctors were scheduled to present health educational talks before lay meetings.

Series of talks were given in a number of Y. M. C. A.s.

Health talks were given before high school assemblies, some of the audiences numbering 1,600 students.

Two programs were arranged for meetings of County Federation of Women's Clubs.

SCIENTIFIC SERVICE APPOINTMENTS:

10—Programs were arranged for county medical societies. The following counties made use of the service:

Scott County, Iowa—Dr. H. L. Kretschmer.
Logan County—Dr. C. C. Maher.
Will-Grundy County—Dr. Edward L. Compere.
St. Clair County—Dr. Clayton J. Lundy.
St. Clair County—Dr. Robert S. Berghoff.
Will-Grundy County—Dr. Ernst Pribram.
Union County—Dr. Edward J. Steiglitz.
Paris Hospital—Dr. Hugo R. Rony.
Will-Grundy County—Dr. Max Cutler.
Fulton County—Dr. E. J. Berkheiser.

RADIO:

26—Radio talks were given over Chicago stations by members of the Chicago Medical Society, and copies of talks were furnished to down-state county societies making use of their local broadcasting facilities.

Hundreds of press articles were released covering activities of county medical societies, the Hobby Show of the Chicago Medical Society, the Annual Meeting of the Illinois State Medical Society, and the usual health columns furnished many Illinois newspapers.

A complete set of material on State Medicine was sent to more than 125 public libraries outside of Chicago.

Contacts were made with the Boy Scouts of America, Chicago Branch; the Child Welfare Committee of the American Legion Auxiliary in Illinois; the Program Service of the Illinois Congress of Parents and Teachers; the Illinois High School Speech League; the First District of the Illinois State Nurses' Association.

Respectfully submitted,
JEAN MCARTHUR, *Secretary.*

IN MEMORIAM

Mrs. Mildred Aschauer (Mrs. A. G.)

On March 19, 1936, an all-wise Providence called to her last reward our dear friend and co-worker, Mildred Aschauer.

Mrs. Aschauer was a prominent civic worker, who held membership in a number of Catholic Societies and the Delta Gamma Delta Sorority. At the time of her death, she was the President of the Woman's Auxiliary to the Sangamon County Medical Society, and the State Program Chairman of the Woman's Auxiliary to the Illinois State Medical Society.

A truly sincere character, an indefatigable worker, loyal and truly devoted to her friends and to her Auxiliary. Her untimely passing will leave a void hard to fill.

We who knew her will miss her genial manner, her ever-willing efforts and her lovable personality. Hers was a life of fine purposes and ideals, which will long be an inspiration to those within the charmed circle of her friends.

HELEN B. HENKEL
HELEN H. COLE
M. CONNIE HAMMOND
EVA PACKARD.

The above tribute was read at the Board meeting of the Woman's Auxiliary, Illinois State Medical Society on March 28th.

COMMITTEE FOR THE STUDY OF SUICIDE

An organization to be known as the Committee for the Study of Suicide, Inc. was incorporated last December under the laws of the State of New York and began its activities early in January. The Committee may in time increase its present membership of ten to a total number of twenty. The Board of Directors and the officers of the new corporation are:

Dr. Gerald R. Jameison, *President*
Mr. Marshall Field, *Vice-President*
Dr. Henry Alsop Riley, *Treasurer*
Dr. Gregory Zilboorg, *Secretary and Director of Research*
Miss Elisabeth G. Brockett
Dr. Franklin G. Ebaugh
Dr. Herman Nunberg
Dr. Dudley D. Shoenfeld
Dr. Bettina Warburg.

The Committee plans to undertake a comprehensive study of suicide as a social and psychological phenomenon. To achieve this the following general outline was adopted:

1. *Intramural studies* of individuals inclined to suicide in selected hospitals for mental diseases. These will embrace constitutional, neurological, psychiatric and psychoanalytic investigations of the phenomenon with special reference to therapy and prevention. This part of the study will include the investigation of suicidal trends or ideas of death emerging in organic deliria.

2. *Extramural studies* of ambulatory cases afflicted with suicidal trends or with obsessional wishes for their own death. These studies will be primarily therapeutic in nature, the cases to be treated in especially selected outpatient clinics and by qualified psychiatrists and psychoanalysts. Regular "control seminars" to follow and to supervise the course of the cases under treatment will be held under the guidance of the Committee. The medical and neurological status of all cases will be a prerequisite of each case record.

3. *Social studies* of suicide will be undertaken along the following general lines. Various attempts at suicide will be followed up by experienced psychiatric social workers; all cases will be studied from the standpoint of social background and history and those who failed in their attempts or have recovered from injuries following a partially successful attempt (prolonged unconsciousness or physical illness) will be urged to submit to psychiatric and psychoanalytic treatment in the hands of the intra- or extramural therapeutic agencies which will be available to the Committee.

4. *Ethnological studies*, i. e. comprehensive investigation of suicide among primitive races, will be one of the first concerns of the Committee, for suicide is a rather frequent occurrence among many primitive races still extant and when studied may throw some light on suicide as a psycho-biological phenomenon. It is planned that an expedition headed by a psychiatrically schooled anthropologist, a psychiatrist and a psychoanalyst should work for a time in a region such as the Melanesian Islands or the Gulf of Papua, and in the interior of the Mexican North West as well as among some of the North American Indian tribes. Further details of this plan will be elaborated.

5. *Historical studies* of suicide will be pursued systematically under the auspices of the Committee, so as to make available a scientific history of the phenomenon as a social and medico-psychological problem.

The Committee was organized under the guidance of its first chairman, the late Dr. Mortimer Williams Raynor, Medical Director of Bloomingdale Hospital, who died on October 5, 1935.

Dr. Henry E. Sigerist, Professor of the History of Medicine at Johns Hopkins University, and Dr. Edward Sapir, Professor of Anthropology at Yale University, are consultant members of the Committee. They will advise and guide in that part of the work which touches their respective fields.

The Executive Offices of the Committee are located at Room 1404, the Medical Arts Center, 57 West 57th Street, New York City, and will be in charge of an executive assistant.

NEW AMBULANCE ORDINANCE

Experience gained during the World War in the immediate care of fractures of the long bones and the striking reduction in mortality following fixation before removal of the injured, as well as the growing number of accidents on highways and elsewhere, have been conducive to an increased interest in the emergency treatment of fractures of the extremities.

The dangers of hemorrhage, tissue damage from movement of the jagged bones, shock and infection, may be seriously enhanced by careless or incompetent handling at the time of the accident, or by well-meant but mistaken efforts to convey the patient to a place of shelter or comfort.

The amount of suffering, the duration of disability, and the degree of permanent incapacity, may frequently hinge upon the character of the immediate attention given to the injured part. Thus it becomes important that a knowledge of first aid should be required of all attendants in ambulances, police cars, or other conveyances intended to provide early help in cases of accident.

The major industries, as well as many public and semi-public organizations, such as the Red Cross, The Boy and Girl Scouts, various nurses' associations, and all military units, are engaged in furthering instruction in first aid work, not only among their own members but among the laity as well.

In recognition of the necessity for proper splinting before transportation, the City Council of Chicago has passed an ordinance requiring all ambulances in Chicago, public or private, or any other vehicle commonly used for the transportation of the sick or injured, to be equipped with a set of simple first aid and splint appliances and to be manned at all times, such vehicle is in use, by an attendant who has obtained from the Chicago Board of Health a certificate of fitness as an ambulance attendant. Satisfactory evidence of his qualifications to fill such position and a demonstration of his ability to render first aid and to apply splints to arm and leg fractures must be furnished by the applicant for such certificate.

Compliance with the requirements of this ordinance should materially increase the comfort and safety of the injured and reduce the economic loss resulting from prolonged convalescence or permanent crippling.

TRAIN SERVICE TO A. M. A. CONVENTION

The Burlington Railroad will operate special modern Pullmans from Chicago to Kansas City, Missouri, for members of the American Medical Association, their families and friends on the nights of May 10, 11, 12, 13 and 14.

The Burlington's crack train, the *"American Royal"* leaves from the Union Depot on the following schedule:

Leave Chicago via Burlington R. R. 7:00 P. M. Central Standard Time. Arrive Kansas City via Burlington R. R. 8:50 A. M. Central Standard Time.

A special 30-day rate of $18.40 round-trip may be had by presenting identification certificates which can be secured by applying to Dr. Olin West, Secretary, 535 N. Dearborn Street, Chicago, Illinois.

A special 30-day rate of $18.40 round trip on the certificate plan may be had. When purchasing ticket ask for a certificate which is signed by the purchaser in the presence of the clerk at the railroad office. This certificate must be countersigned at the registration office of the A. M. A. at Kansas City.

A lower birth is $3.00 and the upper $2.40. For reservations please write or phone your local railway depot or if in Chicago make your reservations through Mr. S. J. Owens, G. A. P. D., Burlington Railroad, 179 W. Jackson Blvd., Chicago, Illinois. Phone: Wabash 2345.

AMERICAN NEISSERIAN MEDICAL SOCIETY

The American Neisserian Medical Society will hold its second annual meeting on May 18, 1936, in the Hotel Statler, Boston, Massachusetts. All who are interested are cordially invited.

UNITED STATES CIVIL SERVICE EXAMINATIONS

Clinical Director (Female), $5,600 a year

Director of Laboratories, $5,600 a year

Associate Pschotherapist (Female), $3,200 a year

Saint Elizabeth's Hospital, Washington, D. C.

Applications must be on file with the United States Civil Service Commission at Washington, D. C., not later than April 20, 1936.

The United States Civil Service Commission announces open competitive examinations for the positions named above. Vacancies in these positions and in positions requiring similar qualifications will be filled from these examinations, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer, or promotion. The salaries named above are subject to a deduction of 3½ per cent toward a retirement annuity, and for the position of Clinical Director (Female) there is a further deduction of $200 for quarters.

DUTIES.—*Clinical Director (Female).*—As general administrator of a major division of a psychiatric hospital, to direct the medical and nursing personnel in connection with the psychiatric examination, care and treatment of more than 1800 women patients.

Director of Laboratories.—As general administrator of the research activities in psychiatry, particularly from a laboratory standpoint, to direct the laboratory units in pathology, chemistry, bacteriology, and related groups; to conduct scientific conferences, and to participate in the various courses of instruction given to physicians and students.

Associate Psychotherapist (Female).—To conduct research and investigational work relative to the causes, symptomatologies, and mechanisms of mental diseases; to treat individual patients by psychotherapy.

BASIS OF RATINGS.—Competitors will not be required to report for examination at any place, but will be rated on their education and experience on a scale of 100, such ratings being based upon competitors' sworn statements in their applications and upon corroborative evidence.

HOTEL ACCOMMODATIONS

The members of the Sangamon County Medical Society in Springfield and the surrounding county are to be the hosts for the 1936 annual meeting and have been working for some months to make it an important and successful gathering.

Although Springfield is well supplied with excellent hotels it is wise to make early reservations to insure hotel accommodations. This is particularly desirable because of the legislative activity and the many conventions that select Springfield as a meeting place.

Members are urged to send reservations direct to the hotels.

Abraham Lincoln Hotel .....300 rooms
St. Nicholas Hotel .....350 rooms
New Leland Hotel .....150 rooms
Illinois Hotel ..... 60 rooms

There are other hotels, which are smaller but comfortable.

HOMER P. MACNAMARA, M. D.,
Chairman, Committee on Hotels.

NOTICE TO GOLF ENTHUSIASTS

Golfing medicos attending the Annual Meeting of the State Medical Society will have the exceptional opportunity of playing on the beautiful eighteen-hole Illini Country Club course and for their benefit there will be held a handicap tournament on Tuesday morning with suitable prizes and luncheon at noon.

Foursomes and twosomes from various cities will contest and the Committee will be glad to arrange a game for you if alone. Bring your clubs along to the meeting and the tournament on Tuesday morning, May 19, 1936. Any information desired will be gladly given if you write to Dr. Fred P. Cowdin, Springfield, Illinois, *Chairman, Golf Committee.*

WOMAN'S AUXILIARY TO THE ILLINOIS STATE MEDICAL SOCIETY

OFFICERS

President—Mrs. Wm. D. Chapman.....Silvis
President-Elect—Mrs. F. P. Hammond.....Chicago
First Vice President—Mrs. A. B. Middleton....Pontiac
Second Vice President—Mrs. N. M. Percy....Chicago
Third Vice President—Mrs. A. H. Brumback..Chicago
Treasurer—Mrs. William Raim .....Chicago
Corresponding Secretary..Mrs. Harold M. Camp.....
..... Monmouth
Recording Secretary—Mrs. I. L. Foulton.....
.....East St. Louis

COUNCILORS

Mrs. Imas Rice .....First District
Mrs. E. E. Beatty .....Second District
Mrs. Lucius Cole .....Third District
Mrs. E. J. Meyer .....Third District
Mrs. Carl Hedberg .....Third District
Mrs. F. E. Bollaert .....Fourth District
Mrs. J. E. Reisch .....Fifth District
..... Sixth District
Mrs. Thomas D. Laney .....Seventh District
Mrs. E. S. Allen .....Eighth District
Mrs. E. W. Burroughs .....Ninth District
Mrs. R. F. Stanton .....Tenth District
Mrs. E. R. Steen .....Eleventh District

CHAIRMEN OF STANDING COMMITTEES

Organization .....Mrs. A. B. Middleton
Press and Publicity .....Mrs. P. R. Blodgett
Legislative .....Mrs. Carl Bartling
Printing .....Mrs. R. K. Packard
Program .....Mrs. A. G. Aschauer
Convention .....Mrs. David H. McCarthy
Revisions .....Mrs. M. L. Hole
Public Relations .....Mrs. John A. Wolfer
Credentials and Registration .....Mrs. J. P. Simonds
Hygeia .....Mrs. H. B. Henkel
Finance .....Mrs. F. P. Hammond
Archives .....Mrs. Frank L. Alford
Hostess .....Mrs. A. H. Brumback
Chaplain .....Mrs. J. P. Simonds

PROGRAM

Monday, May 18, 1936

1:00—Registration.

Tuesday, May 19, 1936

10:00—Board Meeting, Abraham Lincoln Hotel.
11:30—Conference of members with the following State Chairmen: Legislative, Hygeia, Public Relations, Organization of Committees.
12:00—Luncheon, Public Relations—Abraham Lincoln Hotel.
4:00 to 5:30—Tea at the Executive Mansion.
7:00—Bridge Dinner, St. Nicholas Hotel. Mrs. W. D. Chapman, presiding.

Wednesday, May 20, 1936

8:00—Board Breakfast, Abraham Lincoln Hotel.
9:30—Business Session and Memorial Service.
1:00—President's and Past President's Luncheon (Mrs. W. D. Chapman, presiding). Introduction of the incoming president, Mrs. F. P. Hammond, and of the newly elected officers of the Illinois State Board Woman's Auxiliary.

Visitors will please register for one of the following tours at 3:30 P.: M.

1. Drive over the Vachel Lindsay Nature Trail on Lake Springfield with lectures and explanations by Rev. George M. Link, Nature Lecturer and official guide.
2. A tour of state and biologic laboratories allowing one hour for each laboratory.
3. A tour of Abraham Lincoln's residence, tomb and state Historical Library.

These tours will all be taken at 3:30 P. M.

7:00—President's dinner and dance, Abraham Lincoln Hotel.

Thursday, May 21, 1936

9:00—Post Convention Board Meeting, Abraham Lincoln Hotel.

This program subject to change.

PEDIATRICIANS' MEETING

Tuesday Morning, May 19, 1936

KNIGHTS OF COLUMBUS BUILDING

9:00-12:00—

"Congenital Pylorospasm."—Orville Barbour, Peoria.

"Physical Impairments of Deaf and Blind Children."—George L. Drennan, Jacksonville.

"Discussion of Some Common More Serious Conditions of the Newborn."—Arthur Parmalee, Chicago.

"More Recent Advances in Therapeutic Procedures in Pediatrics."—Julius H. Hess, Chicago.

"Breast Feedings."—Round Table Discussion 11:00 A. M. Clifford Grulee, Chicago, Presiding.

"Statistical Review of the Situation."—Clifford Grulee, Chicago.

"Relation to Supplementary Feeding in the Newborn."—Henry Poncher, Chicago.

"Public Health Point of View."—Henry Niblack, Chicago.

"From the Standpoint of Practice."—Gerald Cline, Bloomington.

PEDIATRICS PAPERS IN SCIENTIFIC PROGRAM

Tuesday, May 19, 2:30 *P. M.*

SECTION ON RADIOLOGY

Dr. John A. Bigler, Highland Park. Subject—"Interpretation of Hilus Shadows in Chest X-Rays of Children."

Discussion by D. O. N. Lindberg, Decatur, and Joseph K. Calvin, Chicago.

Tuesday, May 19, 4:30 *P. M.*

SECTION ON PUBLIC HEALTH AND HYGIENE

Dr. Maurice L. Blatt, Chicago. Subject—"Cross Infection—Its Prevention in a Children's Hospital."

Discussion by Archibald Hoyne, Chicago.

Wednesday, May 20, 4:50 *P. M.*

SECTION ON MEDICINE

Dr. Lee Frech, Decatur. Subject—"Present Status of Immunization Against Contagious Diseases."

Discussion by John R. Vonachen, Peoria.

OBSTETRICIANS' AND GYNECOLOGISTS' MEETING

Tuesday Morning, May 19, 1936

9:00—"Sarcoma of the Uterus."—Wm. T. Carlisle, Chicago.

A survey is presented on the literature of Sarcomata of the Uterus with an intimate review of the cases at St. Luke's Hospital in the past five years. A pathological classification is advanced with a lantern slide demonstration depicting the gross and histological types.

The salient features of this series have been summarized with especial reference made to the etiological considerations, the presenting symptoms, the physical and operative findings, the various operative procedures, the type of tumor, and radiation factor, and the prognosis. The outstanding conclusion deduced is the high frequency of error made not only in the pre-operative diagnosis, but in the operative diagnosis and the pathological diagnosis as well.

The difficulty in recognition of this condition is evidenced and the reasons pointed out, but the suggestion is made that, although infrequent, these sarcoma should be considered in the differential diagnosis of uterine tumors.

Discussion opened by Richard K. Collins, Aurora.

9:30—"Gyneplastic and Minor Operations Immediately Following Delivery."—O. H. Crist, Danville.

Need of repair operations following delivery. Opposition of early teaching to this procedure. Some pioneers in this work. Technique of operations. Brief summary of 71 cases.

Discussion opened by Frank F. Maple, Chicago.

10:00—"Splenomegaly in Pregnancy."—William B. Serbin, Chicago.

Enlargement of the spleen during pregnancy is rare. Three cases are reported; two of Banti's disease and one of chronic malaria. In Banti's disease, independent of pregnancy removal of the spleen is followed by improvement or recovery and the associated cirrhosis of the liver subsides. During pregnancy, the disease seems to become progressively worse when the above treatment is instituted. Blood transfusion gives temporary relief. In both of these cases splenotomy was carried out in the first trimester of pregnancy; in one case pregnancy was terminated at the sixth month, with but little improvement; in the other the patient had a spontaneous premature labor followed within a week by thrombophlebitis. Death occurred in five weeks.

In the case of malaria, the spleen was removed in the first half of pregnancy for "mechanical" reasons. The patient made an uneventful recovery; carried to term and had a spontaneous labor and normal puerperium.

Discussion opened by Charles C. Rentfro, Chicago.

10:30—"Endometriosis."—W. A. Malcolm, Peoria.

Endometriomata are tumors arising in or near the female pelvis. They are composed of tissue resembling endometrium which is made up of glandular tissue with typical stroma and round cell infiltration. This tumor menstruates, enlarges slowly, invades tissue progressively, is curable and is not malignant, and after the menopause or castration, retrogresses and atrophies. This is the only tumor that has a definite cure by removal of the ovarian hormone.

The history and literature of endometriomata are reviewed. The various theories developed to explain the occurrence of these tumors is discussed. Their location, pathology and symptomatology are described. The treatment is outlined, emphasis being laid on the relationship between their occurrence and the menstrual life of the patient.

Discussion opened by D. D. Smith, Decatur.

11:00—"The Treatment of Antepartum Hemorrhage."—M. Edward Davis, Chicago.

Hemorrhage in pregnancy is always a serious symptom indicative of serious pathologic complications. It is one of the major causes for maternal morbidity and mortality. During the first trimester of pregnancy abortion and ectopic gestation are the most common causes for bleeding. Hemorrhage rarely occurs during the middle trimester. In the last trimester placenta praevia and abruptio placentae are the most important etiologic causes. Good results depend on an accurate diagnosis, careful preparation of the patient and individualized treatment. Broad principles of treatment can be laid down to guide this individualized treatment. These principles in use at the Chicago Lying-in Hospital have done much to improve our results in the treatment of these complications.

Discussion opened by Floyd L. Heinemeyer, Rockford.

11:30—"Postpartum Hemorrhage in Outpatient Obstetrics."—Henry Buxbaum, Chicago, and I. C. Udesky, Chicago.

This article deals with 455 cases of post-partum hemorrhage occurring in 10,651 consecutive deliveries conducted in the home by the Chicago Maternity Center.

In this analysis is shown the relative importance of such factors as parity, multiple pregnancies, operative

interference, prolonged labors, size of foetus and management of third stage of labor in relation to the incidence of post-partum hemorrhage.

The management of post-patrum hemorrhage in the home is discussed.

12:00—"The Early Diagnosis of Cancer of the Cervix."
—Charles E. Galloway, Evanston.

A few slides compiled by Dr. Galloway, together with slides from Schiller will be shown. A study of Cervical Carcinoma in Evanston and material relative to tristratification of portio epithelium preceeding or associated with carcinoma will be discussed.

Discussion opened by F. R. Towner, Elgin.

WOMEN PHYSICIANS' MEETING

The women physicians of Illinois, all of whom are members of the Illinois State Medical Society, will hold their special meeting on Tuesday morning, May 19, 1936.

9:30—Breakfast at the Leland Hotel.

The program will be devoted to the subject of Maternity and Infant Hygiene. Dr. Carolyn MacDonald will give an address on Syphilis—a problem in prenatal care.

Dr. Bertha VanHoosen will talk on plans for Maternal Mortality Studies which are to be made by women physicians in many countries throughout the world to be presented at the International Meeting in Edinburgh in 1937.

A beautifully illustrated lecture which has been prepared by Dr. VanHoosen from the Century of Progress exhibit on Maternity Hygiene will be presented. This lecture is designed for public education and women doctors will find it suitable for their talks before Women's Clubs, Parent-Teacher Associations and all civic groups.

All women doctors are urged to attend this session to meet old friends and enjoy this special occasion as well as the regular sessions of the Illinois State Medical Society for the following three days.

Dr. Elizabeth B. Ball, President of the Medical Women of Illinois, will officiate at this meeting.

VETERANS' SERVICE COMMITTEE DINNER

The annual dinner of the Veterans' Service Committee will be held on Tuesday evening, May 19, 1936, at the Abraham Lincoln Hotel. Dr. F. O. Fredrickson, Chairman of the Committee, will act as toastmaster for the occasion, and all members of the Society and guests desiring to attend this interesting function, whether ex-service men or not, are welcome. An interesting program following the dinner has been arranged.

1. "The duties of the Post and District Surgeons of the Medical Commission of the American Legion"—E. Ralph May, Department Surgeon, Department of Illinois, Chester.

2. "Veterans' Legislation as It Affects the Medical Profession"—R. L. Sensenich, Member of the Legislative Committee on Veterans' Affairs, American Medical Association; President, Indiana State Medical Association, South Bend, Ind.

3. "Veterans' Medical Legislation from the Veterans' Standpoint"—J. Bernard Murphy, Commander, American Legion, Department of Illinois.

THE PRESIDENT'S DINNER

The annual tribute to the President of the Illinois State Medical Society will be given in the form of the President's Dinner, which will be held at the Abraham Lincoln Hotel at 7:00 P. M., Wednesday, May 20th. The immediate past president of the Society will officiate at the dinner, and all living past presidents will be special guests at the dinner.

The committee in charge of this dinner is making elaborate plans so that all members will be anxious to pay their respects to our president, who has had the interests of the Illinois State Medical Society uppermost in his thoughts during the past year.

Complete details concerning the President's Dinner will be given in the May ILLINOIS MEDICAL JOURNAL.

SECRETARIES' CONFERENCE

NOTE: The officers of the Conference are arranging a most attractive program which will be of interest to all officers of county medical societies, as well as the members in general, all of whom are invited to be present at the Conference.

This Conference will be held on Tuesday morning, May 19, 1936, and complete details with the official program will appear in the May ILLINOIS MEDICAL JOURNAL.

CORONARY ARTERY THROMBOSIS WITH PERICARDIAL EFFUSION

A. M. Master and Harry L. Jaffe, New York (*Journal A. M. A.*, April 6, 1935), cite two cases in which the evidence appears fairly conclusive that the pericardial effusion was due to an acute coronary artery occlusion. In the first case, a man, aged 60, an acute illness was present with a previous history of syphilis but no evidence of rheumatic fever or rheumatic heart disease. There was also no reason to consider the diagnosis of tuberculosis. On the other hand, the history was typical of coronary artery thrombosis in a patient with arterial hypertension. A roentgenogram and pericardial rub were proof of a pericarditis with effusion. In the second case, a woman aged 57, the question arose during her hospital stay whether or not the lung signs were those of pneumonia, and hence whether the pericarditis with effusion was a complication of the pneumonia. Pain over the chest, even in the precordial region, may be present in a patient suffering from pneumonia. Clinically, however, the patient's course was not that of pneumonia. Further proof that coronary artery disease was the basis of her trouble was observed when she returned to the hospital for re-examination. She complained of precordial pressure following the slightest physical exertion. The electrocardiogram corroborated the diagnosis, for it still showed evidence of myocardial damage. It may be thought that instead of a pericardial effusion a hemopericardium occurred. This is hard to disprove completely, as the patients survived and paracentesis was not performed during life. However, the course in hemopericardium is usually rapid and fatal.

ILLINOIS STATE MEDICAL SOCIETY

86th ANNUAL MEETING

PRELIMINARY PROGRAM

SPRINGFIELD, ILL.

May 19, 20, 21, 1936

MEETINGS OF THE HOUSE OF DELEGATES

Tuesday Afternoon, May 19, 1936

Knights of Columbus Building.

3:00—First Meeting of the House of Delegates, called to order by the President, Charles B. Reed, for Reports of Officers, Councilors, Committees, introduction of resolutions, and for the transaction of other business which may come before the House.

Thursday Morning, May 21, 1936

8:30—Second Meeting of the House of Delegates, called to order by the President, for the election of officers, councilors, committees and delegates and alternates to the American Medical Association. Reports of Reference Committees and action on same, and for the transaction of other business that may come before the House.

GENERAL SESSIONS

Tuesday Afternoon, May 19, 1936

1:00—Eighty-Sixth Annual Meeting officially opened by the president.

Invocation.

Address of Welcome—Mayor of Springfield.

Address of Welcome—President of the Sangamon County Medical Society.

Report of Chairman, Committee on Arrangements.

Adjournment for Oration in Medicine.

1:30—Oration in Medicine Speaker and Subject to be announced.

Wednesday Morning, May 20, 1936

11:00—Oration in Surgery.

George W. Crile, Cleveland, Ohio.

Subject to be announced.

Wednesday Afternoon, May 20, 1936

1:30—President's Address.

Chas. B. Reed, President, Illinois State Medical Society, Chicago.

Thursday Morning, May 21, 1936

Induction of the President-Elect.

Immediately following the close of the last meeting of the House of Delegates, Dr. Rolland L. Green will be inducted into the office of President of the Illinois State Medical Society by the retiring President.

SECTION PROGRAMS

SECTION ON MEDICINE

George Parker.....*Chairman*
James G. Carr.....*Secretary*

Tuesday Afternoon, May 19, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"Low Dosage Irradiation of the Pituitary and Adrenals for Treatment of Non-Nephritic Hypertension."—James H. Hutton, Chicago.

This work, now in progress more than three years, based on the theory that most cases of essential hypertension are due to functional abnormality of the pituitary and adrenals and that this abnormality can be corrected in part by irradiation of these two organs with very small doses of the x-ray. Evidence and experimental work are summarized. Technique of treatment. Results—reduction in blood pressure, relief of symptoms and certain other phenomena. Statistics—our own and those of other men. Conclusions.

Discussion opened by Hermon H. Cole, Springfield.

2:50—"Miners' Hand—A Vasospastic Disease of the Hands of Miners Due to Vibration."—C. H. Drenckhahn, Urbana.

This syndrome is not infrequent in miners. It consists of a numbness and a dull aching sensation in the hands. Vasospastic phenomena can be demonstrated. Arteriograms will be shown. Miners experience considerable vibration in the hands while handling their picks, and undoubtedly this is the etiologic factor. This syndrome has never before been described in miners, although a similar syndrome has been described in pneumatic hammer workers and shoe factory workers. Therapy is discussed. Because coal mining is such an important industry in Illinois this syndrome warrants description before the Medical Society.

Discussion opened by Harold Voris, Chicago.

3:10—"The Medical Significance of Unrecognized Perforated Peptic Ulcer."—Harry A. Singer, Chicago.

The current opinion with regard to perforated peptic ulcer is that the symptomatology and clinical course permit ready recognition in all but a very small percentage of cases. It is furthermore generally believed that in

all but approximately five per cent of perforations a diffuse and progressive suppurative peritonitis occurs and leads to death within a few days unless surgery is instituted.

The evidence adduced from recent studies indicates that a typical ruptured peptic ulcer is probably as frequent as the classicad form and that the clinical course is extremely variable. Also, that a fatal outcome in unoperated cases is not by any means the invariable result, but that spontaneous closure of the perforation and prompt recovery is an everyday occurrence.

The recognition of these typical perforations is of extreme importance because it clarifies many diagnostic mysteries not only at the time of the acute symptoms but also subsequently when complications and sequelae are expected to occur. During the acute stage erroneous diagnoses are the rule. These include thoracic as well as intra-abdominal and retroperitoneal disease. Appendicitis, cholecystitis and cholelethiasis, intestinal obstruction, pancreatitis and renal affections are frequently misdiagnosed. Coronary thrombosis, pleurisy, pneumonia, and spontaneous pneumothorax are also falsely assumed to be present.

Among the complications and sequelae of perforated peptic ulcer are perigastritis simulating carcinoma, hepatic, subphrenic, perigastric or pelvic abscess, and fibrous peritonitis producing intestinal obstruction. However, without a history of previous perforation, the diagnosis of any of the above affections is difficult to establish and, if correctly diagnosed, the etiology of these maladies generally remains a mystery.

Discussion opened by J. Donald Milligan, Elgin.

3:30—"Ketosis in Epilepsy—Effects of Diacetone Alcohol on Institutional Epileptics."—Isidore Finkelman, Elgin, W. Mary Stephens, Louis B. Shapiro, and DeLester Sackett.

In order to determine whether the acetone bodies developed in the course of the ketogenic diet are the factors that inhibit epileptic convulsions, we treated eleven institutional epileptic patients with diacetone alcohol. The anticonvulsant properties of this drug were demonstrated by the experiments of Keith. Two to six drams of the drug were given daily during two periods of treatment. The first period was from forty to fifty days and the last period was fifty days. There was an intervening period of twenty-five rays during which no medication was given. It was found that diacetone alcohol was not anticonvulsant in institutional epileptics. The urine in seven patients was positive for acetone and there was no correlation between the number and severity of the seizures and the acetone reaction in the urine. The blood sugar was increased in four patients and lowered in one. Diacetone alcohol was injected intravenously into six rabbits in order to ascertain the relation of this drug to blood sugar. It was found that there was a definite increase in the blood sugar level following the administration of this drug.

The reason for this discrepancy in the action of diacetone alcohol in human epilepsy in which it is not efficacious and in the thujone convlusions in rabbits where it is definitely anticonvulsant is probably due to a failure of obtaining a sufficiently high ketone blood level in human epilepsy at the time a convulsive seizure is imminent. The ketogenic diet may be more efficacious in maintaining a high ketone blood level than the administration of the ketone bodies as such. However, it is more likely that the results obtained with the ketogenic diet are due to the shifting of intracellular fluid and potassium across the cell membrane that accompanies a strongly ketogenic diet.

The rise in blood sugar caused by diacetone alcohol is due to an inhibition of insulin activity which this drug probably causes.

Discussion opened by T. T. Stone, Chicago.

3:50—"Acute Coronary Occlusion: Points on Diagnosis and Treatment."—Harry A. Richter, Wilmette.

An arbitray division of the patients according to their predominating symptoms is an aid to diagnosis, and a careful history, supplemented by serial four-lead electrocardiograms, often makes the diagnosis clear. Three case histories illustrating the so-called "silent" group are given in abstract.

A short film of the changes noted in serial four-lead electrocardiograms will be shown, and the importance of the prolonged period of absolute bed rest stressed.

Discussion opened by James A. Walsh, Peoria.

4:10—"Pneumothorax Treatments for Outpatients."—Fred M. Meixner, Peoria.

Pneumothorax treatments are simple. Indications and contraindications. Use in cases of early or minimal tuberculosis. Supplants institutional care in selected cases. Should be available to hospital, home and office patients. Uses in bronchiectasis. Typical case reports.

Discussion opened by Alen H. Hruby, Chicago.

4:30—"Various Activities of the Beating Heart."—Emmett Keating, Chicago.

In this paper the author dwells upon a number of things which every doctor knows, knowledge that linbers in the subconscious mind of all doctors, but is given consideration by only a few.

If health is to be maintained, the rhythm of the heart must not be disturbed. If any of even the most common physical laws that have to do with the work of the heart are interfered with, heart rhythm will suffer.

Attention is called to the common occurrence of heart symptoms appearing in patients when the cause of their trouble is located somewhere other than the heart. The use of digitalis in these conditions is of no value and may do harm.

No heart study is complete without a fluoroscopic examination, pictures and an electrocardiogram. The highest value to be placed on any laboratory procedure is the extent to which it teaches the doctor the neces-

sity for a good history and a careful physical examination.

Two charts are used to illustrate some of the points discussed.

Discussion opened by Warren Pearce, Quincy.

Wednesday Morning, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

Joint Session with Sections on Surgery and Public Health and Hygiene.

SYMPOSIUM ON AMEBIASIS

8.30—"Contagion and Public Health Aspect of Amebiasis."—Mr. Joel I. Connolly, Chicago.

This paper will give a brief summary of the findings in the outbreak of epidemic amebic dysentery having a focus in two Chicago hotels in 1933.

The reasons for believing that contamination of water through faulty plumbing was the principal cause of the outbreak will be presented, and the specific defects and methods of correction will be given. The lessons resulting from the epidemic, which are generally applicable, will be summarized.

Illustrative material will be used if possible.

Discussion opened by Clarence W. Klassen, Springfield.

8:50—"The Clinical Aspects of Amebiasis."—Samuel E. Munson, Springfield.

1. Blood may or may not be found in the stools, depending on the acute or chronic types.
2. Discomfort and pain in lower abdomen.
3. Poor appetite.
4. Leukocytes increased.
5. Where blood is not observed in the stools, occult blood is found.
6. Slides showing types of organism and effect on the tissues.

9:10—"The Laboratory Diagnosis of Amebiasis."—Bertha Kaplan Spector, Chicago.

9:30—"The Medical Management of Amebiasis."—Arthur E. Mahle, Wilmette.

9:50—"Surgical Problems in Amebiasis."—Gatewood, Chicago.

10:10—Opening Discussion (Pathological).—R. H. Jaffe, Chicago.

10:25—Public Health Discussion.—Andrew R. Mailer, Galesburg.

10:30—Medical Discussion.—R. F. Traut, Chicago.

10:35—Closing Discussions.

Wednesday Afternoon, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—Chairman's Address:—"Problems Encountered in the Interpretation of Mechanical and Laboratory Aids to Diagnosis."—George Parker, Peoria.

2:50—"The Estimation of Liver Function in Hepatic Disease."—Edmund F. Foley, Chicago.

As a result of the extensive work directed toward the investigation of the functions of the liver, the indisputable fact stands out that this organ possesses an enormous reserve and recuperative power. This factor is so great that it prevents the appraisement of the normal functional capacity of the liver and compensates for stress and strain until failure occurs. It can be said that the functional tests employed are in reality not tests of function but of failure of function. The activities of the liver are so multiple and diverse that there is no laboratory procedure which measures them in aggregate. Singly, of the various roles of the liver, those which are most accommodative for estimation are the excretory, carbohydrate metabolic, and proteogenic. These functions are discussed in relation to the tests employed.

Clinically, at least, it is apparent that in disease of the liver all of the recognized functions are not equally impaired. Thus, in "catarrhal jaundice" the excretory function is seriously impaired, whereas the vital metabolic roles are disproportionately preserved. This lack of parallelism in the degree of functional injury is of service in the clinical survey of hepatic disorder and is discussed from a diagnostic and prognostic standpoint.

In the presence of obvious failure of the excretory function of the liver, as manifested by choluric jaundice, the employment of another excretory test (Bromsulphalein or bilirubin excretion) is patently of no practical value. A discussion of the relative worth of the individual tests is given.

Also considered is the interesting observation of the failure of storage of the effective antianemic substance, and of hemoglobin disassociation in liver disease.

Discussion opened by Harold C. Ochsner, Waukegan.

3:10—"The Recrudescence of Malaria."—Tom Kirkwood, Lawrenceville.

The mosquito which transmits malaria is found in all parts of Illinois. Many inhabitants of certain parts of this state are carriers of this disease. The introduction of one of these carriers into what is considered a non-malarial region may easily lead to an outbreak of malarial fever. Hard roads, with consequent increase in travel, and shifts in population due to economic factors, are conducive to the dissemination of carriers and the spread of the disease.

Instead of having disappeared, malaria is on the increase in Illinois, and may be a menace in any part of the state.

Discussion opened by Leroy H. Sloan, Chicago.

3:30—"Infectious Mononucleosis."—Harry J. Isaacs, Chicago.

Infectious mononucleosis is a disease characterized by fever, enlarged and cervical lymph glands, peculiar posture of the head, abdominal pain and an increased number of mononuclear cells. The disease is contagious, occurs usually during the spring and winter months, and is characterized by an absolute and relative increase in the non-granular mononuclear cells. The white count varies between 15,000 and 30,000, and of the total cells 80-90% are of the non-granular type.

The disease is of interest because it is easily confused with acute lymphatic leukemia, tuberculosis of the cervical glands, lues, Hodgkins, prolonged causes of temperature and acute abdominal conditions. It is the early use of the Heterophilic Agglutination test that absolutely and specifically clinches the diagnosis of infectious mononucleosis. The literature is reviewed with the developmental steps in the establishment of the above specific test. Three cases are reported by the author.

Rèsumé.

Discussion opened by Warner H. Newcomb, Jacksonville.

3:50—"Some Unusual Features of Metastatic Tumors of the Lung."—Cecil M. Jack, Decatur.

Considering the high incidence of primary carcinoma of the lung in recent years (as proved by autopsy material) the clinical diagnosis of these cases is alarmingly inadequate. There are three reasons for this: One, that the tumor is symptomless for a very long time. Second, that the symptoms that do develop are often not due directly to the primary tumor but to the indirect effect on the lung and pleural cavity. Third, that extensive metastases are so frequent that the first symptoms are often those due to metastases.

Early diagnosis is important in cancer in general, but in cancer of the lung it is of paramount importance for even the slightest improvement to be made in diagnosis. Considering the recent progress of thoracic surgery, it falls upon the clinicians to present the surgeons with operable cases.

In the reports of the few successfully operated cases, one finds that although the surgery was successful, the patient usually died of metastases within a few weeks or months.

Among the problems that present themselves in the early diagnosis of lung cancer, that of differentiating metastatic from primary tumors has not received the attention it deserves. The present discussion is limited to this problem.

Discussion opened by Harry Magee, Peoria.

4:10—"A New Electric Stethoscope and Stethograph."—Joseph K. Narat, Chicago.

Objective findings are more dependable than subjective; therefore, instruments are in use for recording temperature, blood pressure, metabolism, acuity of vision, etc. Numerous attempts have been made to record heart sounds. Most of such devices employ galvanometers, cathode oscillographs and other expensive and complicated apparatuses. Furthermore, a dark room is necessary for developing the records.

A brief review of such devices follows.

The new apparatus constructed by me offers following advantages:

1. It is very simple to operate. 2. Its price, if placed on a commercial basis, would make it available to a general practitioner and not only to institutions. 3. It is portable. 4. It employes new principle of sound recording without a photographic camera. No developing is necessary and no dark room is required. The apparatus offers following opportunities:

1. It can be used for didactic purposes. 2. Permanent records can be made of rare cases. 3. Repeated records of the same patient allow a comparison of findings at various intervals. 4. The records allow a study of the time relations between the murmurs and normal heart sounds. 5. Murmurs not audible to a normal ear can be discovered at early stages of the disease. 6. Gallope rhythm, presystolic murmurs and various other conditions can be studied.

The apparatus is not a substitute but a supplement to the electrocardiograph. Simultaneous phonocardiographic and electrocardiographic records can be made. Headphones allow auscultation of amplified heart sounds simultaneously with recording them; at the same time the curve recorded is also visible on a screen. The new principle of recording may be employed also in the electrocardiograph, avoiding the necessity of having a camera and a dark room.

Discussion opened by E. M. Stevenson, Bloomington.

4:30—"Skin Manifestations of Drug Intoxications."—Wm. J. Morginson, Springfield.

A description of the immediate and remote objective symptoms which may be a manifestation of dermatitis medicamentosa or drug intoxications with suggestions and procedures recommended for the avoidance of these eruptions. The drugs considered are those commonly prescribed, as arsenic, quinine, barbiturates, bromides, iodides, phenolphthalein, mercury, bismuth, etc.

Discussion opened by J. M. McCuskey, Peoria.

4:50—"Present Status of Immunization against Contagious Diseases."—Lee Frech, Decatur.

Any discussion of immunization would be amiss without a review of the factors of immunity. This paper deals with the various agents advocated for creating an artificial immunity; the phases of different types of immunity; and the importance of immunity upon the happiness of the individual and the welfare of the community.

Discussion opened by John R. Vonachen, Peoria.

Thursday Morning, May 21, 1936

KNIGHTS OF COLUMBUS BUILDING

Joint Session with Sections on Surgery; Eye,

Ear, Nose and Throat; Public Health and Hygiene; and Radiology

SYMPOSIUM ON VASCULAR DISEASES

8:30—"Etiology and Public Health Aspects of Vascular Disease."—C. Elliott Bell, Decatur.

This paper will first discuss the etiology of heart disease. An attempt will be made to classify diseases of the heart into etiological groups in order of their relative importance. Thereafter, certain well-defined types of heart disease will be discussed from an etiological viewpoint.

In discussing the public health aspects of heart disease, it will be noted that the proper control of infectious disease producing heart lesions is essential. Convalescence from acute illness must be of adequate duration. The need for proper education of the public in this respect will be pointed out. One of the major needs at present is a proper type of convalescent home for those recuperating from cardiac disease. Such homes should be available at a cost within reach of the patient, or, if his economic status is such that he is unable to pay, these homes should be available without cost.

8:50—"Ocular Findings in Vascular Disease." Kathryn Chapman, Chicago.

9:10—"Vertigo as a Syndrome in Vascular Disease."—S. L. Shapiro, Chicago.

9:30—"The Diagnosis of Peripheral Vascular Disease."—George W. Scupham, Chicago.

9:50—"Cerebral Vascular Disease."—E. W. Cannady, East St. Louis.

A discussion of cerebral vascular disease must be limited and will be confined to the vasospastic phenomena, cerebral arteriosclerosis and syphilitic endarteritis. The pathology, symptomatology, diagnosis and treatment of the various conditions will be mentioned briefly.

The vasospastic phenomena are found in several clinical entities, the most prominent of which are lead encephalopathy, Raymond's disease, and hypertensive encephalopathy. The latter condition is of great clinical importance, but it is only recently that it has been receiving the attention that it deserves. It has been termed the hypertensive cerebral attack, pseudo-uremia, acute uremia, and cerebral crisis by some writers.

Hypertensive encephalopathy is characterized by the occurrence of transient cerebral phenomena in patients having marked hypertension without demonstrable renal impairment. The clinical features of twenty cases observed in the medical wards of the Barnes Hospital, St. Louis, and the Peter Bent Brigham Hospital, Boston, will be mentioned briefly. Pathological studies of five are reported.

The treatment of cerebral vascular accidents may be divided into prophylaxis, the management of the acute insult, and the subsequent attempt to hasten recovery from the hemiplegia.

10:10—"Rentgenologic Aspect of Vascular Disease."—E. R. Crowder, Evanston.

A description of a new instrument used in studying the heart and great vessels, with suggestions as to practical application in the diagnosis and treatment of cardiac and vascular disease.

10:30—"The Surgical Management of Peripheral Vascular Disease."—Leo Zimmerman, Chicago.

10:50—Opening Discussion, Medical—Ford K. Hick, Chicago.

11:00—Opening Discussion, Surgical—C. B. Ripley, Galesburg.

11:10—Opening Discussion, Eye, Ear, Nose and Throat—George H. Woodruff, Joliet.

11:20—Closing Discussions.

SECTION ON SURGERY

John A. Wolfer.....*Chairman*
C. Paul White.....*Secretary*

Tuesday Afternoon, May 19, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"Correlation of Clinical Treatment of Burns—With Recent Experimental Studies."—Henry N. Harkins, Chicago.

3:00—"A Method of Performing Nephrostomy and Its Value."—W. W. Holland, Beardstown.

3:30—"The Surgical Treatment of Arthritis."—Philip H. Kreuscher, Chicago.

THE TREATMENT OF FRACTURES OF THE NECK OF THE FEMUR

4:00—"The Whitman Method."—H. E. Cooper, Peoria.

4:20—"The Steel Pin Method."—H. A. Sofield, Chicago.

4:40—"The Roger Anderson Method."—H. D. Junkin, Paris.

5:00—Opening Discussion.—Paul B. Magnuson, Chicago.

5:10—Discussion.—J. H. Oliver, Kewanee.

Wednesday Morning, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

Joint Session with Sections on Medicine and Public Health and Hygiene.

SYMPOSIUM ON AMEBIASIS

8:30—"Contagion and Public Health Aspect of Amebiasis."—Mr. Joel I. Connolly, Chicago.

This paper will give a brief summary of the findings

in the outbreak of epidemic amebic dysentery having a focus in two Chicago hotels in 1933.

The reasons for believing that contamination of water through faulty plumbing was the principal cause of the outbreak will be presented, and the specific defects and methods of correction will be given. The lessons resulting from the epidemic, which are generally applicable, will be summarized.

Illustrative material will be used if possible.

Discussion opened by Clarence W. Klassen, Springfield.

8:50—"The Clinical Aspects of Amebiasis."—Samuel E. Munson, Springfield.

1. Blood may or may not be found in the stools, depending on the acute or chronic types.
2. Discomfort and pain in lower abdomen.
3. Poor appetite.
4. Leukocytes increased.
5. Where blood is not observed in the stools, occult blood is found.
6. Slides showing types of organism and effect on the tissues.

9:10—"The Laboratory Diagnosis of Amebiasis."—Bertha Kaplan Spector, Chicago.

9:30—"The Medical Management of Amebiasis."—Arthur E. Mahle, Wilmette.

9:50—"Surgical Problems in Amebiasis."—Gatewood, Chicago.

10:10—Opening Discussion (Pathological).—R. H. Jaffe, Chicago.

10:25—Public Health Discussion.—Andrew R. Mailer, Galesburg.

10:30—Medical Discussion.—R. F. Traut, Chicago.

10:35—Closing Discussions.

Wednesday Afternoon, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"Tuberculosis of the Kidney in Childhood and Early Adolescence."—H. L. Kretschmer, Chicago.

3:00—"Carcinoma of the Colon."—D. B. Freeman, Moline.

3:30—"The Injection Treatment of Hernia." W. W. McMillan, Chicago.

4:30—"Cirrhosis of the Liver as a Surgical Problem."—Gustav Zechel, Chicago.

5:00—"The Surgery of the Gallbladder and Bile Ducts."—C. B. Puestow, Chicago.

Thursday Morning, May 21, 1936

8:30—Joint Session with Sections on Medicine, Eye, Ear, Nose and Throat, Public Health and Hygiene and Radiology. See Section on Medicine for Program.

Section on Eye, Ear, Nose and Throat

Watson W. Gailey ..... *Chairman*

John A. Cavanaugh..... *Secretary*

Tuesday Morning, May 19, 1936

KNIGHTS OF COLUMBUS BUILDING

11:00—"Notes on Plastic Surgery of the Orbit." (Slides)—M. L. Folk, Chicago.

The most important principles of plastic surgery about the eye and orbit, the pre- and post-operative treatment and the operative technique will be discussed. Cases illustrated by lantern slides and showing cicatrical ectropion, congenital and acquired colobomata, and congenital pigmented nevi of the lids, symblepharon, entropion, exophthalmos, and restoration of shrunken eye sockets, will be presented.

Discussion opened by Frank N. Davenport, Moline; John F. Deal, Springfield; J. S. Clark, Freeport.

11:20—"Injuries to the Esophagus."—Chas. D. Sneller, Peoria.

The esophagus is the passageway taken by all foods from the mouth to the stomach. Chemical, thermal and physical injury to this tube may take place from the accidental swallowing of materials, considered as improper foods, or from unskillful instrumentation. This mad lead to abrasion, laceration or perforation of the esophagus. The mucosa has remarkable resisting and healing powers, but the submucosa and deeper structures are poorly equipped to withstand the onslaught of injury and bacterial invasion. Various factors are concerned in the better understanding and treatment of injuries to this organ.

Discussion opened by Wm. A. McNichols, Dixon; Harold Watkins, Bloomington; Paul Holinger, Chicago.

11:40—"Surgical Treatment of Retinal Detachment."—S. J. Meyer, Chicago.

Discussion opened by Harry W. Woodruff, Joliet; Chas. V. Voight, Mattoon; A. L. Adams, Jacksonville.

Tuesday Afternoon, May 19, 1936

ST. JOHN'S HOSPITAL

2:30—Conference Groups.

Ear:

Simple Mastoid Operation.—Elison L. Ross, Northwestern University.

Complications of Otitis Media—Howard C. Ballenger, Northwestern University.

Nose:

D. B. Hayden and Associates. Rush Medical College.

Pharynx and Larynx:

Morphology.

Applied surgical anatomy—problems in diagnosis and treatment. (Slides and specimens).—Francis L. Lederer, L. Z. Fishman, Paul Holinger and N. D. Fabricant, Illinois University.

Eye:

Diagnosis and Treatment of Trachoma.—Hallard Beard, University of Illinois.

Classification of Concomitant Squint with Reference to Treatment.—Geo. Guibor, Northwestern University.

Retinal Detachment as a Surgical Condition.—Sanford Gifford, Northwestern University.

Skiascopy with Cylinders. — Safety Measures Intra-ocular Surgery.—Wm. F. Moncrieff, Rush Medical College.

Wednesday Morning, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

9:00—"Use of Obturator in Treatment of Chronic Antrum Infections." — G. C. Otrich, Belleville.

Discussions opened by O. E. Van Alyea, Chicago; Jesse H. Roth, Kankakee; H. P. Bagley, Galesburg.

9:30—"Treatment of Ophthalmia Neonatorum."—J. Bellows, Chicago.

Discussion opened by Harry O. Williams, Centralia; Wm. R. Fringer, Rockford; Jos. F. Duane, Peoria.

10:00—"Practical Points in Hearing Tests and Selection of Hearing Aids." — Robt. Sonnenschein, Chicago.

Discussions opened by H. L. Ford, Champaign; Wm. H. Elmer, Rockford; J. J. Theobald, Oak Park.

10:30—"Treatment of Trachoma in Southern Illinois."—A. F. Lenzen, Peru.

One thousand cases of trachoma were treated. Two main methods of treatment were used and compared. Other methods of treatment will be considered. Five hundred operations were performed. Surgical procedures will be described, and prophylaxis will be considered.

Discussions opened by E. E. Woodside, Marion; Eli Selinger, Chicago; Dwight C. Orcutt, Chicago.

Wednesday Afternoon, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"Allergy of the Eye, Ear, Nose and Throat."—Leon Unger, Chicago.

Allergy may strike almost any part of the body. It has special predilection for the nose any eyes; ears are occasionally involved. Discussion of allergic conjunctivitis, rhinitis, hay fever, Meniere's syndrome, angio-neurotic edema. Treatment, specific and non-specific.

Discussions opened by G. S. Duntley, Macomb; A. R. Hollender, Chicago; Lawrence J. Hughes, Elgin.

3:00—"Middle Ear Infections."—C. H. Christoph, Chicago.

Discussions opened by Walter Stevenson, Quincy; Harry C. Hill, Streator; Samuel Salinger, Chicago.

3:30—"Physiotherapy as Applied to the Eye, Ear, Nose and Throat."—J. S. Coulter, Chicago.

Discussions opened by A. B. Middleton, Pontiac; Maurice H. Cottle, Chicago; Louis L. Steiner, Danville.

4:00—"Practical Consideration of Petrositis with Report of Two Cases."—Jos. C. Beck, and M. R. Guttman. Chicago.

This paper will deal with a brief résumè on the subject of Petrositis and a report of two cases operated upon, illustrating various details in the clinical course, pathology and operative procedures.

Discussions opened by C. E. McClellan, Decatur; Wm. E. Hagens. Chicago; Stuart Broadwell. Springfield.

4:30—"A Comparison of Scopolamine and Atropin Cycloplegia."—Louis Bothman. Chicago.

Discussions opened by R. H. Woods, LaSalle; F. W. Broderick, Sterling; E. C. Spitze, East St. Louis.

5:00—"Chronic Sinus Disease in Children."—J. R. Lindsay, Chicago.

Discussions opened by Theo. E. Walsh, Chicago; Louis Ostrum, Rock Island; Thomas C. Galloway, Evanston.

Thursday Morning May 21, 1936

8:30—Joint Session with Sections on Medicine, Surgery, Public Health and Hygiene and Radiology. See Section on Medicine for program.

SECTION ON PUBLIC HEALTH AND HYGIENE

W. M. Talbert ..... *Chairman*
Archibald Hoyne ..... *Secretary*

Tuesday Afternoon, May 19, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"Treatment of Meningococcic Meningitis with Meningococcus Antitoxin."—Winston Tucker, State Health Department, Springfield.

Since February 1, 1935, fifty-eight cases of meiningococci meningitis have been rospitalized in the St. John's Hospital unit for contagious diseases in Springfield. Of this number, 40 were from the City of Springfield, while the remaining 18 were from nearby communities. In addition to the clinical diagnosis, stained smears of the spinal fluid were prepared in each instance, and the diagnosis corroborated by the finding of meningococci in the smears. The first 16 cases were treated with antimeningococcus serum, but in spite of this treatment nine of the patients succumbed, which is a fatality rate of 56 per cent. During the latter part of March, 1935, meningococcus antitoxin was placed on the market, and this preparation has been used in the treatment of all subsequent cases of meningococcic meningitis in this hospital. Forty-two cases have been treated with this preparation, generally by the intravenous route, the antitoxin being diluted in twice the quantity of 10 per cent glucose solution. Death took place in 9 of the 42 patients, a fatality rate of 22 per cent. An analysis of this group of cases will be presented, with particular reference to the interval of time which elapsed between the onset of symptoms and the administration of meningococcus antitoxin.

Discussion opened by Thomas D. Masters, Springfield.

3:00—"Occurrence of Vercidal Substances in Patients with Poliomyelitis: Bearing on Serum Treatment and Vaccination."—Paul H. Harmon, and H. N. Harkins, Chicago.

The recent attempts at vaccination against poliomyelitis, together with the irregular appearances of neutralizing substances in the blood after an attack of poliomyelitis have prompted us to extend our original studies concerning the poliocidal substances in human serums, made in 1928 and 1929. At that time, the authors (in collaboration with Drs. H. J. Shaughnessy and F. B. Gordon) found neutralizing substances in a large number of normal persons, both adults and children. Limited observations upon the age incidence suggested the possibility of acquisition of these substances with increasing age. We have titrated recently monkey serums at frequent intervals following experimental poliomyelitis and determined the exact appearance time of the poliocidal substance. We have likewise titrated the serums of humans at all stages during early poliomyelitis and those of the same patients three and four months after the acute attack. We find that clinical poliomyelitis occurs when poliocidal substances are already present in the blood. An almost universal presence of these substances very early in the disease, so early that they could not possibly be due to the current attack, suggest that the poliocidal substances have less to do with resistance and recovery in this disease than was formerly supposed. For example, in our series of fourteen serums, there are patients with little or no poliocidal substance that suffer only a light attack of the disease. It is quite noticeable that no patients with adequate initial amounts of poliocidal substance has had widespread paralysis. The general aspects of poliomyelitis immunity are discussed in relation to artificial immunity (vaccination) and to natural immunity.

Discussion opened by H. J. Shaughnessy, Springfield.

3:30—"A Five Year Review of Anterior Poliomyelitis in the Chicago Area."—Sidney O. Levinson, Chicago.

All preparalytic and early paralytic patients in the Chicago area during the years 1931 to 1935, inclusive, were treated with relatively large doses of convalescent poliomyelitis serum. Although there has been no epidemic during this time, cases have occured endemically every year during the summar and fall seasons.

In the preparalytic group, a review shows that the mortality has been very low, and the incidence of paralysis almost negligible. Most of the weaknesses that appeared have been temporary and have cleared up within a short period after the illness. No severe degree of paralysis has supervened in those preparalytic cases who were treated with adequate roses of serum. In the early paralytic group, who were suffering from the active disease and in whom the paralysis seemed to be spreading, the results of serum therapy are difficult to evaluate. In general, the clinical impression has been that most of the patients have shown cessation of illness and some recovery from the paralysis.

Discussion opened by Julius Hess, Chicago.

4:00—"Episemic Respiratory Diseases in Early Life."—Scott Wilkinson, Decatur.

A clinical study of epidemic respiratory disease in infants and young children for the years 1931 to 1935, inclusive. An analysis of relative frequency as compared to certain common contagious diseases; the involvement of specific age periods; relation to influenza and other epidemics; the clinical features in early life. Comments on the interpretation of these findings from the epidemological viewpoint.

Discussion opened by J. Howard Beard, Urbana.

4:30—"Cross Infection: Its Prevention in a Children's Hospital."—Maurice L. Blatt, Chicago.

The control of cross-infection is dependent upon

(a) The recognition and exclusion from the institution of contagious diseases in the pre-dromal, early and convalescent stages and when full blown.

(b) The recognition of carriers on admission.

(c) The giving of whole human blood to all new admits.

(d) If contagious case occurs in the institution, its isolation and the immediate immunization of susceptible contacts.

(e) Institution of specific therapy.

Discussion opened by Archibald Hoyne, Chicago.

5:00—"How to Reduce Infant Mortality."—Henry C. Niblack, Board of Health, Chicago.

The principal causes of infant mortality can still be classified into three groups: conditions peculiar to early infancy, respiratory, and gastro-intestinal diseases. The marked lowering of the infant mortality rate in some communities has been due principally to reducing the number of deaths from gastro-intestinal diseases. Future efforts must be directed toward reducing the deaths in the other two groups. A discussion of some of the measures along the above lines that are being carried out in a large metropolitan community.

Discussion opened by John Carey, Joliet.

Wednesday Morning, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

Joint Session with Sections on Medicine and Surgery.

SYMPOSIUM ON AMEBIASIS

8:30—"Contagion and Public Health Aspect of Amebiasis."—Mr. Joel I. Connolly, Chicago.

This paper will give a brief summary of the findings in the outbreak of epidemic amebic dysentery having a focus in two Chicago hotels in 1933.

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1. Blood may or may not be found in the stools, depending on the acute or chronic types.
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6. Slides showing types of organism and effect on the tissues.

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10:25—Public Health Discussion.—Andrew R. Mailer, Galesburg.

10:30—Medical Discussion.—R. F. Traut, Chicago.

10:35—Closing Discussions.

Wednesday Afternoon, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"The Incidence and Clinical Significance of the Various Types of the Diphtheria Bacillis Found in Illinois."—Thomas C. Grubb, and H. J. Shaughnessy, Springfield.

In 1931 Anderson and his co-workers in Leeds, England, announced that all strains of the diphtheria bacillus could be divided into three distinct types—gravis, mitis and intermediate—based on their colonial morphology on a chocolate-tellurite agar medium. They stated further that the gravis strains were associated with the more severe, toxic cases of diphtheria, while the mitis strains were usually isolated from the mild cases. In general, Anderson's original findings have been amply confirmed by subsequent studies in England.

In order to determine the incidence of the three types in this state, positive diphtheria cultures coming to the laboratories of the State Department of Public Health during the past six months have been grown on Anderson's chocolate-tellurite agar medium for the purpose of classifying the strains as gravis, mitis, etc. A small percentage of the culture has also been examined for virulence and starch fermentation. The clinical significance of the three types was determined by sending questionnaires to the physicians who had submitted the positive cultures. Information regarding the location of the false membrane, type of the disease, amount of antitoxin injected, response to the antitoxin, etc., was requested in order to ascertain the relative severity of the case. The above data have been tabulated and correlated.

Discussion opened by Perry J. Melnick, Decatur.

3:00—"Public Health Problems of Southern Illinois."—B. E. Montgomery, Harrisburg.

Communicable diseases result in substantially greater proportionate losses in southern Illinois than in either the central or northern sections of the State. Statistical data are presented which show that losses in the southern area from typhoid fever, infantile diarrhea, diphtheria, tuberculosis and whooping cough amount to 450 lives per year more than would be the case if mortality rates were no higher than elsewhere in the State. The excess infant mortality is about 250 deaths annually. The cause of these excess losses is a lack

of organized official public health facilities rather than racial characteristics, the quality of medical service or climate. Supportive evidence on these points is presented. A plan for improving the situation is offered.

Discussion opened by John J. McShane, Springfield.

3:30—"The Etiologic Diagnostic and Medico-legal Problems of Occupational Diseases."—C. O. Sappington, Chicago.

Silicosis has made the general population occupational-disease-conscious, but there are other important occupational diseases deserving of serious consideration.

Etiology has been a most neglected factor. Mere industrial exposure does not constitute a hazard. Industrial conditions must be critically studied and measured before correct diagnosis can be made. This does not mean reliance upon unproved statements in the history of the patient.

Diagnosis involves not only adequate examinations, but also appropriate clinical laboratory and x-ray data, as well as differential opinion. Pre-employment and periodic examinations are real diagnostic problems.

The chief medico-legal issues arise because of deficiency in etiologic information, and consequent errors in diagnosis. The medical profession must extend its influence and basic knowledge in occupational disease work if usefulness is to be continued and preserved.

Discussion opened by Wm. D. McNally, Chicago; Vernon Long, Decatur.

4:10—"Basic Principles in the Treatment of Acute Gonorrhea."—Leon M. Beilin, Chicago.

We are handicapped in our study of pathology and therapy of gonorrheal infection mainly on account of inability to reproduce this disease in lower animals and to develop an active immunity against this infection. Basic principles in the treatment of acute gonorrhea are summed up in the promotion of effective drainage through active diuresis, observation of rigid hygiene, etc. To be effective, the treatment must be continuous and measures taken to counteract the disease must at all times be appropriate for each succeeding stage in the inflammatory reaction of the tissues to the gonococcal invasion. After all, we are merely trying to assist Nature and not setting out to perform miracles with an imposing array of drugs.

Discussion opened by Harry C. Rolnick, Chicago.

4:40—"Effectiveness of the Oral Administration of Ephedrine in the Common Cold."—G. Howard Gowen, Chicago.

The treatment of acute coryza has been most diverse. To date there are no specific biological or pharmaceutical agents. Diehl's preparation of "papavarine and codeine" seems quite effective, but is too narcotic, and it is not unreasonable to suppose that the chief motive action of this treatment is that the patient does not care whether he has coryza or not, having been rendered less alert to his distress by having been made somewhat "dopy." Considering that most cases of coryza are fundamentally of an allergic nature, we decided to experiment with an ephedrine preparation which has been successfully employed in some cases of Hay Fever, Asthma and other allergic states. As ephedrine has a tendency to cause psychic excitation, most especially insomnia, it seemed rational to combine it with a sedative such as an isoamylethylbarbituric acid.

We first employed in combination ephedrine sulphate 0.024 gm. (⅜ grain) and isoamylethylbarbituric acid 0.048 gm. (¾ grain). The results on this first series of cases were:

Total cases treated	109
Improved	93 or 85%
Not improved	16 or 15%

We also observed at this time 37 controls to whom similar capsules were given containing only milk sugar. The results were:

Total controls	37
Improved	10 or 27%
Not improved	27 or 73%

During our investigations undue effects of the drug were observed in a few instances resulting in palpitation or grastric distress. On this basis we decided to employ a smaller dosage.

The revised dosage was ephedrine sulphate 0.008 gm. (⅛ grain) and isoamylethylbarbituric acid 0.016 gm. (¼ grain). The results in the second series were:

Total cases treated	137
Improved	114 or 83%
Not improved	23 or 17%

In the second series there was only one case of palpitation and no cases of gastric distress.

We have just completed a third series of about 200 cases employing ephedrine sulphate (⅙ grain) and isoamylethylbarbituric acid (⅜ grain). We have not had time to evaluate our results, but we consider this to be the most satisfactory dosage and in general the results should be about as in the former series.

Our work was carried out on students, technicians, faculty members and a few outside cases. In all improved cases the course of the infection was definitely shortened, cutting down markedly the days of absence from duty and seemingly in this respect being a worthwhile preventive measure.

Discussion opened by E. F. Pearson, Springfield.

Thursday Morning, May 21, 1936

8:30—Joint Session with Sections on Medicine, Surgery, Eye, Ear, Nose and Throat and and Radiology. See Section on Medicine for program.

Section on Radiology

George M. Landau ..... *Chairman*
Roswell T. Pettit ..... *Secretary*

Tuesday Afternoon, May 19, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"Interpretation of Hilus Shadows in Chest X-rays of Children."—John Bilger, Highland Park.

Structures making up hilar shadows, as check on findings at necropsy with x-rays. Films will be shown demonstrating normal hilus, hilar tuberculosis, pneumonia, Hodgkin's disease and other pathological conditions.

Discussion opened by D. O. N. Lindberg, Decatur; Joseph K. Calvin, Chicago.

3:00—"Renal and Ureteral Anomalies."—Wm. W. Fuery, Chicago.

Renal and ureteral anomalies have proven of great interest. Congenital anomalies constitute 40% of all pathologic conditions of the kidney and ureter, hence the necessity of recognizing them as something more than curiosities. Complete urologic and urographic examinations are essential.

Discussion opened by Arthur Sprenger, Peoria; E. L. Jenkinson, Chicago.

3:30—"Radiological Diagnosis and Treatment of Prostatic Lesions."—Perry B. Goodwin, Peoria.

Radiological evidence as produced by film study using an opaque medium and the results obtained from Roentgentherapy in cases of carcinoma of the prostate.

Discussion opened by H. B. Henkel, Springfield.

4:00—"Irradiation Therapy of Intracranial Neoplasms."—T. J. Wachowski, and Adolf Hartung, Chicago.

This paper reviews the history of irradiation therapy of intracranial neoplasms. The dangers are pointed out and indications for treatment, based on histological and clinical studies, are presented. Fifteen cases of verified brain tumors treated by irradiation are presented.

Discussion opened by Eric Oldberg, Chicago.

4:30—"Intrapelvic Protrusion of the Acetabulum (Ott's Pelvis)."—Lawrence M. Hilt, Springfield.

Report of three cases (one was treated as a fracture for over two months). Approximately seventy cases of Otto's Pelvis have been reported in the literature, although first described by Otto in 1824.

Discussion opened by F. Flinn, Decatur; C. H. Zoller, Litchfield.

5:00—"Neuroblastoma from the Standpoint of the Roentgenologist."—Edwin L. Rypins, Bloomington.

A brief description of the pathology is to be given and three cases of the Hutchinson type are presented, giving characteristic Roentgen ray findings and microscopic sections and one case that was treated with x-ray. The Roentgenologist can make a definite diagnosis, even though the pathologist cannot be sure.

Discussion opened by Cesare Gianturco, Urbana.

Wednesday Morning. May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

8:30—"The Radiologist and the Hospital."—W. M. Hartman, Macomb.

Is Radiology the practice of medicine or glorified hospital technical service? What is hospital service and what is medical service? Radiology, because of recent development, has been subjected to much economic strain. Responsibility of hospital staff. Solution lies with general medical profession.

Discussion opened by Everett Coleman, Canton; Perry Goodwin, Peoria.

9:00—"Chest Roentgenography: New Standards and Improved Techniques."—D. O. N. Lindberg, Decatur.

The criteria of adequacy of chest Roengenograms necessary to exclude demonstrable lesions is defined. Basic standards of technique to provide satisfactory films are discussed and indications for use of higher milliamperages, high speed Bucky and tubes with rotating anodes are presented.

Discussion opened by Roswell T. Pettit, Ottawa; Willard Van Hazel, Chicago.

9:30—"Roentgen Therapy of Cellulitis."—B. C. Cushway, and Roe J. Maier, Chicago.

Presentation of sixy cases of Cellulitis with discussion of present day conception of biological action of Roentgen radiation in this disease. Description of local and systemic reaction is given. Cooperation in treatment between attending physician and Roentgenologist is emphasized.

Discussion opened by I. S. Trostler, Chicago; Paul G. Papsdorf, Chicago.

10:00—Report of Cancer Committee of the Illinois State Medical Society.

Bowman C. Crowell, *Chairman,* Chicago.
E. G. C. Williams, Danville.
Milton G. Bohrod, Peoria.
J. Simonds, Chicago.
R. H. Jaffe, Chicago.

10:30—"Comparative Value of Various Methods in the Roentgenological Examination of the Colon."—Cesare Gianturco, Urbana.

Various methods used in Roentgenological examination of colon are described and compared as to their value. Special consideration is given to the fluoroscopic examination to the double contrast technique and to the use of semi-transparent media.

Discussion opened by B. Orndorff, Chicago; Max Hubeny, Chicago.

Wednesday Afternoon, May 20, 1936

KNIGHTS OF COLUMBUS BUILDING

2:30—"The Principles of Radium Therapy."—Frank E. Simpson, Chicago.

Effects of radium rays on living tissues. The selective effects of radium instead of the caustic effects should be used wherever possible. The undesirability of trying to screen off tumors from the surrounding tissues. Surface irradiations contrasted with radium "puncture." Some of the reasons for the use of surface irradiations in preference to radium "puncture." The use of radium in some common diseases, such as carcinoma affecting the skin, mouth, cervix uteri, etc. Other uses of radium.

Discussion opened by Roswell T. Pettit, Ottawa; E. G. C. Williams, Danville.

3:00—"Radiation Therapy and Uterine Cancer."—Louis C. Kress, New York State Institute for Malignant Disease, Buffalo, New York.

Uterine Malignancy has been treated by all forms of radium and x-ray therapy—interstitial, intracautery, and external with radon seeds, radium tubes, packs and high voltage x-ray. Advantages of 4½ gram radium pack will be discussed. Advantages of high voltage x-ray will be presented. Slides showing effects of radiation upon cancer will be shown. End results and complications will be presented.

Discussion opened by Robert A. Arens, Chicago; Herbert Schmitz, Chicago.

4:00—"Repercussion Therapy."—E. G. C. Williams, Danville.

A report of the study and research into the use of repercussion or secondary radiation increased by injections of solutions and colloidal suspensions into tumor masses during x-radiation describing materials and methods used.

Discussion opened by Prof. Geo. L. Clark, Urbana; Roy Keggereis, Chicago.

4:30—"Use of Radium in Post-Operative Parotitis."—Fred Decker, Peoria.

X-ray and radium therapy have been used in treatment of inflammatory conditions for many years. The use of radium in the treatment of post-operative parotitis is not so commonly known. A brief rèsumé of the literature and case reports will be given.

Discussion opened by E. L. Jenkinson, Chicago; Lawrence M. Hilt, Springfield.

Thursday Morning, May 21, 1936

8:30—Joint Session with Sections on Medicine, Surgery, Eye, Ear, Nose and Throat and Public Health and Hygiene. See Section on Medicine for program.

RULES GOVERNING PRESENTATION OF PAPERS

"All papers read by members shall be limited to twenty minutes, and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject.

"All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section when read, and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and will not appear in medical print before it has been published in the ILLINOIS MEDICAL JOURNAL.

"A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of the regular session if time permits, or as an alternative at the end of the program.

"All subjects shall be confined strictly to the subject in hand.

"No paper shall appear in the printed transactions of the meeting unless read in full or in abstract."

(From the By-Laws of Illinois State Medical Society.)

SCIENTIFIC EXHIBITS

1. "Constitution and Cancer"—American Society for the Control of Cancer, New York City.
2. "The Infant's Stool"—Jesse R. Gerstley, Katherine N. Howell and David S. Cohn, Michael Reese Hospital, Chicago.
3. "Electrosurgical Obliteration of the Gall Bladder"—Max Thorek, Surgical Service, Cook County and American Hospitals, Chicago.
4. "Neuropsychiatric Relationships to General Medicine"—Groves Blake Smith, Godfred, Illinois.
5. Cutaneous Manifestations of Syphilis"—Clark W. Finnerud, Representative for the Scientific Exhibit Committee of the Section on Dermatology and Syphilology of the American Medical Association, Rush Medical College of the University of Chicago.
6. "Statistical Studies"—Illinois Department of Public Health, Springfield.
7. "First Aid in Eye Injuries"—Thomas D. Allen and Glenway W. Nethercut, Illinois Eye and Ear Infirmary, Chicago.
8. "Demonstration of Collapse Therapy in Pulmonary Tuberculosis"—Chicago Municipal Tuberculosis Sanitarium, Chicago.
9. "Clinical and Experimental Studies in Cerebrospinal Fluid"—Abraham Levinson and David S. Cohn, Chicago.
10. "Permanent Identification of the New Born"—Gilbert P. Pond, West Suburban Hospital, Oak Park.
11. "Sweat; Physiological and Biochemical Studies"—Theodore Cornbleet, E. R. Pace and H. C. Schorr, University of Illinois Medical School, Chicago.
12. "Electric Stethoscope and Stethograph"—Joseph K. Narat, Chicago.
13. "Pathology of Amebiasis"—R. H. Jaffe, De-

partment of Pathology, Cook County Hospital and Cook County Graduate School of Medicine, Chicago.

14. "The Incidence of Atherosclerosis"—N. S. Davis, III, Department of Pathology, Northwestern University Medical School, Chicago.

15. "Effect of Metabolic Disturbances of Teeth"—I. Schour and A. G. Brodie, University of Illinois College of Dentistry, Chicago.

16. "The Pigmentations of the Skin Including Neoplasms"—S. William Becker, Section of Dermatology, University of Chicago.

17. "Edema and Blood Pressure as Influenced by Minerals"—M. Herbert Becker, Renal Clinic, Northwestern University Medical School, Chicago.

18. "Radium and Radium Therapy"—Frank E. Simpson, Frank E. Simpson Institute of Radium Therapy, Chicago.

19. "The Diagnosis and Management of Upper Abdominal Problems"—J. Donald Milligan, Pelton Clinic, Elgin.

20. "Vitamin C: Cevitamic Acid"—Arthur F. Abt, Northwestern University Medical School, Chicago.

21. "Glands of Internal Secretion"—W. O. Thompson, Arthur Dean Bevan, N. J. Heckel, P. K. Thompson and S. G. Taylor, III, Rush Medical College, Presbyterian and Cook County Hospitals, Chicago.

22. "The American Medical Association."

23. "Illinois State Planning Commission."

24. "Tumors of the Skin"—Erwin P. Zeisler, Northwestern University Medical School, Chicago.

25. "Diabetic Coma, Its Prevention and Treatment"—R. T. Woodyatt, Chicago.

26. "Radiographic Study of Anatomy"—Harold O. Mahoney, Northwestern University Medical School, Chicago.

27. "The Medical Library"—Sangamon County Medical Society, Springfield, Ill.

NOTE: This list is incomplete, but the complete list and data concerning scientific exhibits will be published in the May ILLINOIS MEDICAL JOURNAL.

TECHNICAL EXHIBITORS AT 1936 ANNUAL MEETING

A. S. Aloe Company, St. Louis, Missouri.

Bard-Parker Company, Inc., Danbury, Connecticut.

R. B. Davis Sales Company, Hoboken, New Jersey.

DePuy Manufacturing Company, Warsaw, Indiana.

Gerber Products Company, Fremont, Michigan.

H. J. Heinz Company, Pittsburgh, Pennsylvania.

Horlick's Malted Milk Corporation, Racine, Wisconsin.

Kellogg Company, Battle Creek, Michigan.

J. B. Lippincott Company, Philadelphia, Pennsylvania.

Libby, McNeill & Libby, Chicago, Illinois.

Lea & Febiger, Philadelphia, Pennsylvania.

Lepel High Frequency Laboratories, New York, New York.

V. Mueller & Company, Chicago, Illinois.

The C. V. Mosby Company, St. Louis, Missouri.

Mellin's Food Company, Boston, Massachusetts.

McIntosh Electrical Corporation, Chicago, Illinois.

The Medical Protective Company, Wheaton, Illinois.

M. & R. Dietetic Laboratories, Inc., Columbus, Ohio.

Middlewest Instrument Company, Chicago, Illinois.

Mead Johnson & Company, Evansville, Indiana.

Philip Morris & Co., Ltd., Inc., New York, New York.

Sutliff & Case Co., Inc., Peoria, Illinois.

W. B. Saunders Company, Philadelphia, Pennsylvania.

Universal Products Corporation, Pottstown, Pennsylvania.

White-Haines Optical Company, Columbus, Ohio.

NOTES ON EXHIBITS

The Universal Products Corporation will be represented by an exhibit of Surgeons' X-L-Lyte, a compact and serviceable diagnostic set, and not expensive. The set contains: ear speculum, tonsil pillar retractor, tongue depressor, magnifying lens, and nasal speculum, with direct illumination for all. Nickel silver curette, probe, ear spoon and applicator are included in the set. The entire set is contained in a neat and serviceable leather case which is equipped with a hookless fastener.

The A. S. Aloe Company, in Booth No. 1, will show a complete general line of instruments and equipment, offering everything for the doctor and hospital. A line of rustless steel instruments will be offered at a special discount. In addition will be shown the new Aloe Short Wave Diatherm and the new style Elliott machine. The Aloe Company's Illinois representatives, Mr. Kruse and Mr. Drennan, will be in attendance to serve in any way possible.

Look up these unusual new books at the J. B. Lippincott's exhibit: Pfaundler and Schlossmann, "Diseases of Children"; Peham and Amreich, "Operative Gynecology"; Kirschner and Ravdin, "Operative Surgery"; McBride, "Disability Evaluation"; Herrmann, "Passive Vascular Exercises"; Barker, "Treatment of the Commoner Diseases"; Emerson, "The Nervous Patient"; Barborka, "Treatment by Diet"; Goldthwait, "Body Mechanics"; Sr. Gabriel's "Through the Patient's Eyes"; Moore, "Principles of Ethics."

And the new editions just issued of these well-known texts and reference books: Eisendrath and Rolnick, "Urology"; Anspach, "Gynecology"; Davis and Muller, "Applied Anatomy"; Thorek, "Surgical Errors and Safeguards"; "Rehberger, "Quick Reference Book of Medicine and Surgery"; "International Clinics," and "Annals of Surgery."

All these books are unusually and beautifully illustrated, with the exception of Barker, and must be seen to be appreciated. You will be welcome at Booth No. 2 and will not be importuned to buy.

The most exacting requirements of adequate liability protection are those of the professional liability field. Representatives thoroughly trained in professional liability underwriting invite you to confer with them at Booth No. 4. These are the representatives of The

Medical Protective Company, specialists in providing protection for professional men.

When you are visiting the commercial exhibits, spend some of your time at Booth No. 5 to have demonstrated some of the outstanding features of the new "Jones Motor Basal" made by the Middlewest Instrument Company, Chicago, Illinois. You will be interested in the waterless, noiseless, no calculation of this lifetime-guaranteed instrument.

The DePuy Manufacturing Company will exhibit in Booth No. 8 at the Illinois State Medical Meeting in Springfield the DePuy Reducing Frame for double fractures of the lower leg, the adjustable Hyperextension Frame for applying plaster jackets, the double duty Bone Drill which will handle Kirschner Wire and Steinman Pins, various types of Kirschner Bows to meet the needs of the individual or industrial surgeon or the surgeon who does referred work, the Rocking Leg Splint for each bed pan service and treatment of fractures of the femur, gunshot wounds of the lower leg.

At Booth No. 9 Lea & Febiger exhibit, under the supervision of Mr. L. E. Drury, a number of important new works, as well as new editions of other standard medical books. Among the new works are: Hawes and Stone, "Pulmonary Tuberculosis"; DeRivas, "Parasitology and Tropical Medicine"; Berglund and Medes, "The Kidney"; Graham, Singer and Ballon, "Surgical Diseases of the Chest." New editions are also shown of Bridges' "Dietetics"; Kovac's "Electrotherapy and Light Therapy"; Jeliffe and White, "Diseases of the Nervous System"; Pemberton, "Arthritis"; Speed, "Fractures and Dislocations"; Boyd, "Pathology of Internal Diseases"; Knowles' "Dermatology"; Stimson, "The Common Contagious Diseases," and Haden's "Dental Infection and Systemic Disease."

The Philip Morris & Co., Ltd., Inc., in Booth No. 10 will demonstrate the method by which it was found that Philip Morris cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than ordinary cigarettes in which glycerine is employed.

Gerber's Strained Foods will be on display at Booth No. 11. There are illustrations and charts descriptive of the new Shaker Cooker process and samples open for inspection.

Booklets and leaflets are available, also scientific reprints. Some of the booklets are suitable for distribution by physicians, and we welcome inspection before ordering supplies.

A feature of the Mead Johnson exhibit in Booth 12 will be a display of the Percomorph group of products; namely, Mead's Oleum Percomorphum, 50%, in liquid and in capsule form, and Mead's Cod Liver Oil Fortified with Percomorph Liver Oil.

The selection of Mellin's Food as a milk modifier enables the physician to have at hand an effective means for making diet adjustment to meet the needs of the individual infant and without sacrificing nutritional requirements. You are urged to call at Booth No. 13 to discuss your feeding problems.

V. Mueller and Company will present an interesting exhibit of the latest surgical instruments and equipment for the Surgeon, Specialist, and General Practitioner at Booth No. 14, featuring:

New Sightscope for magnified vision, with illumination attachment.

The Elliott Treatment Regulator for applying heat therapy for acute or chronic inflammatory conditions in the female pelvis and the male pelvis.

Masson's Fascia Stripper.

Thomas Oxinjector—a new apparatus for the administration of oxygen or other gases by the injection method: subcutaneous, intravenous, intraperitoneal, or rectal.

New Model Focal-Lite—an all purpose headlight. Projects a clear beam of light for illuminating cavities.

Smith-Peterson-Johansson Flanged Nail, with an improved mallet, as used by Dr. M. S. Henderson of Rochester, Minnesota.

The most outstanding recent development in the science of infant feeding—Libby's Homogenized Foods. This new process mechanically ruptures the food cells of vegetables, fruits, and cereals, refines the cellulose tissue, releases the contained nutriment, and makes these foods more easy to digest and more completely assimilated. Photomicrographs of strained and homogenized foods graphically illustrate the advantages of the newer process. The Research Laboratories of Libby, McNeill & Libby invite you to inspect their display in Booth No. 15.

Quality physical therapy products of McIntosh Electrical Corporation, 223-233 North California Avenue, Chicago, will be on exhibit in Booth No. 16. The meeting will be in charge of the Sales Manager, Mr. R. Herbert Hogan. Mr. Hogan will be assisted by two Illinois state representatives, Mr. E. N. Swinford and Mr. J. W. Maselter. The Hogan Brevatherm Short-Wave Diathermy Unit will be featured. The Brevatherm has proven itself to be one of the outstanding short-wave units on the market, and acceptance by the Council on Physical Therapy of the A. M. A. gives assurance of its safety and operating efficiency in actual clinical work. Other McIntosh equipment on exhibition include the new No. 1510 Modernistic Sinustat, the No. 8624 Standard Diathermy, and one of the best dollar value units in infra-red therapy, the No. 3610 Biolite.

This publishing house of Philadelphia and London, W. B. Saunders Company, will exhibit a complete line of all their titles in Booth 17. Among them will be many new books and editions, including Christopher's brand new Textbook of Surgery, the new Mayo Clinic

Volume, Berens' work on the Eye and Its Diseases, Levine's Clinical Heart Diseases, Diseases of the Respiratory Tract (Fortnight Lectures of the New York Academy of Medicine), Wolf's Endochinology in Practice, Rehfuss and Nelson's Medical Treatment of Gallbladder Disease, Eusterman and Balfour's Diseases of the Stomach and Duodenum, Hinman's Urology, The Improved Medical Clinics of North America and the Surgical Clinics of North America, and many others. In addition, of course, there will be such standard works as Curtis' Obstetrics and Gynecology, Bickham's Operative Surgery, Beckman's Treatment, Kitchens' Diagnosis, Todd and Sanford's Laboratory Diagnosis.

You are invited to visit Booth No. 18. Not only will you be cordially welcomed, but you will be served delicious Cocomalt—hot or cold—as you choose. Come early—come often.

Cocomalt has a rich content of Iron, Calcium, Phosphorus and Vitamin D. It is an outstanding high quality food product scientifically formulated.

In Booth No. 20, Sutliff & Case Company, Inc., will display only one item at the Illinois State Medical Meeting at Springfield. This item, of course, is A-Viam-Ung—the new Vitamin "A" ointment.

The Horlick's Malted Milk Corporation in Booth No. 21 will exhibit Horlick's the Original Malted Milk, both in natural and in chocolate flavors, powder and tablet forms.

Among the special uses of Horlick's Malted Milk which will be featured are its advantages in the liquid diet, notably in cases of tuberculosis and other wasting diseases, during and after pneumonia, in gastric and duodenal ulcers and acidosis. Horlick's has also been proven by its results, for over fifty years, as a dependable food in infant feeding, even in difficult cases.

Among the Bard-Parker products to be exhibited at Booth No. 22 will be the new Rib-Back surgical blade, incorporating new standards of sharpness, rigidity and strength. Also will be shown a complete line of stainless steel scissors with renewable edges, which require no resharpening, and a very complete demonstration of Rustproof Sterilization for surgical instruments.

H. J. Hein Company, Pittsburgh, Pennsylvania, invites you to visit their display in Booth No. 23 of Tomato Juice, Breakfast Cereals and Strained Foods, especially prepared for infant and convalescent feeding.

Register for the second edition of their Nutritional Charts. This revised edition, published in December, 1935, contains, along with the vitamin, mineral and food composition charts, new sections on daily requirements and food allergy.

The exhibit of The White-Haines Optical Company, distributors of Blue Ribbon Ophthalmic Supplies, with general offices located at Columbus, Ohio, will feature the latest developments of Optical Science. White-Haines have a Springfield office located at 524 East Capitol Avenue.

Included in the exhibit (Booth No. 24) will be a demonstration of Loxit, a screwless construction type of rimless glasses. Lenses to be featured are the Panoptik Bifocal (including the improved cataract lens) and the Orthogon Soft-Lite lens that provides glare protection with wide vision correction. A particularly interesting section of the exhibit will be the display of Bausch & Lomb instruments, including the Clason Visual Acuity Meter, the Binocular Ophthalmoscope, the Slit Lamp, also the instrument that aroused so much interest throughout the country—the Wottring Rotoscope that simplifies the whole procedure of Orthoptic Training. The Rotoscope, first shown at the Academy meeting last year in Cincinnati, is now being used all over the country by Ophthalmologists, hospitals and clinics.

The White-Haines exhibit will be in charge of E. F. Wildermuth, general sales manager from Columbus, Ohio. Joe Kihn, manager of White-Haines of Springfield, and Donald Hunter, salesman. Be sure to visit Booth No. 24 if you are doing eye work.

The C. V. Mosby Company will exhibit its complete line of medical publications. Among the newer items to be displayed for the first time will be the following:

Taussig, "Abortion—Spontaneous and Induced."
Bray, "Clinical Laboratory Methods."
Dodge, "Medical Mycology."
Shelling, "The Parathyroid in Health and Disease."
Sherwood, "Immunology."
Muray, "Examination of the Patient."
Hansel, "Allergy of the Nose and Paranasal Sinuses."

Many other new books and new editions will also be available for visitors attending the convention to examine them. A cordial invitation will be extended all guests at this meeting to visit the Bosby booth No. 28.

The Lepel High Frequency Laboratories, Inc., New York City, will display their mobile and portable short and ultra-short wave machines, and also the Lepel quartz-mercury Ultra-violet Lamp.

These products have been accepted by the A. M. A. and have received the endorsement of leading physicians everywhere. Don't fail to see the Lepel exhibit at Booth No. 30.

Doctors are invited to visit the Kellogg Booth No. 53 for a cup of refreshing Kaffee Hag Coffee. Bottle exhibits showing the stages in decaffeinizing coffee are displayed and complete explanation of process is given. Reprints of articles in the *Journal of Pharmacology and Experimental Therapeutics* on the Effects of Caffeine, based on reports of research at the University of Michigan, are available.

Kellogg's All-Bran carries the Seal of Approval of the American Medical Association. Reprints of reports covering research on bran at Columbia University will

be distributed at the booth. The exhibit is in charge of Mrs. Winifred B. Loggans from the Home Economics Department.

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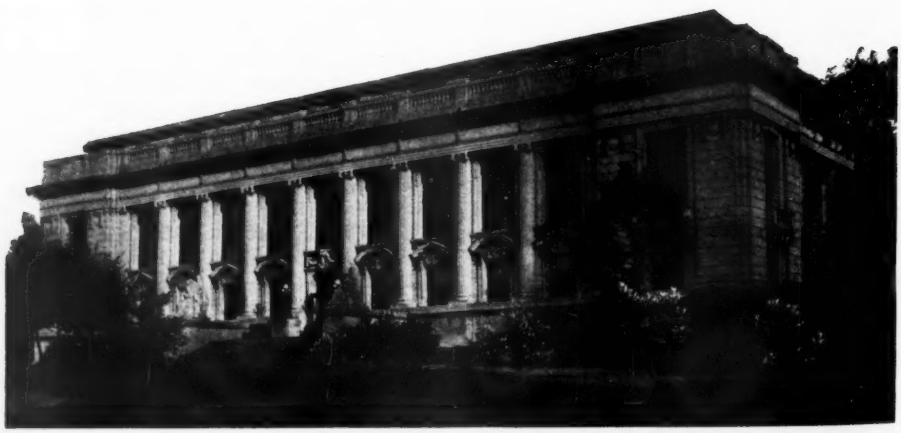
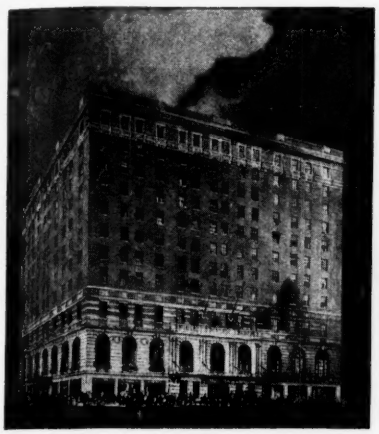
HISTORIC SPRINGFIELD

Abraham Lincoln

Head of the Andrew O'Connor statue at east front of the Illinois State Capitol. This fine monument was unveiled on October 5, 1918, Illinois centennial year. It represents Lincoln in a saddened mood as he made his farewell address to Springfield from the rear platform of the train that was taking him to Washington. The words of this address are inscribed in granite on the west side of the monument.

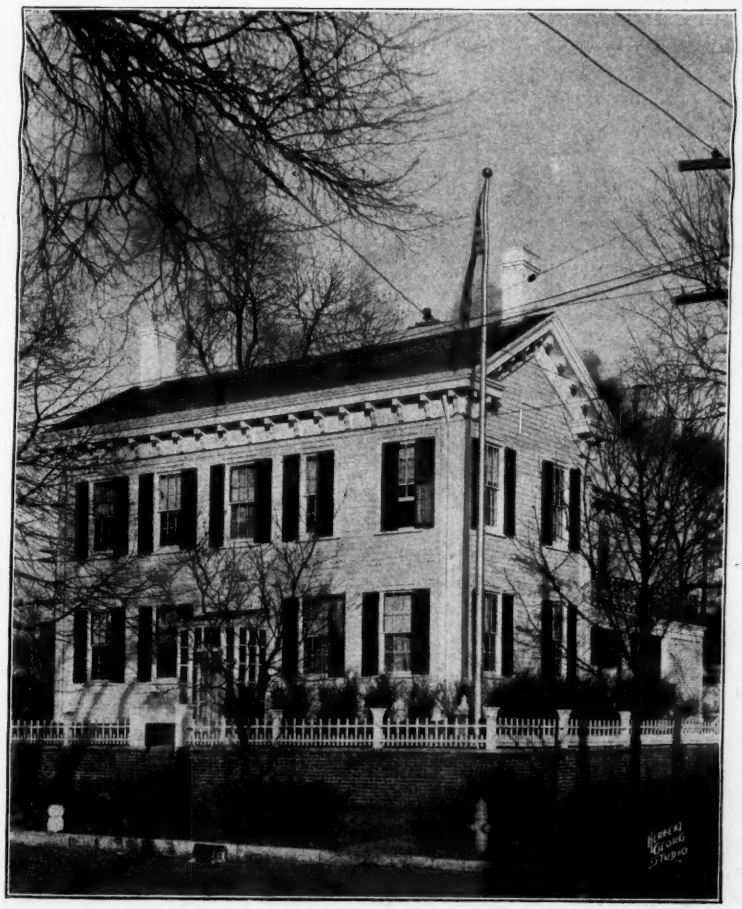


Illinois Supreme Court Building—North Front



Abraham Lincoln Hotel
Headquarters Hotel

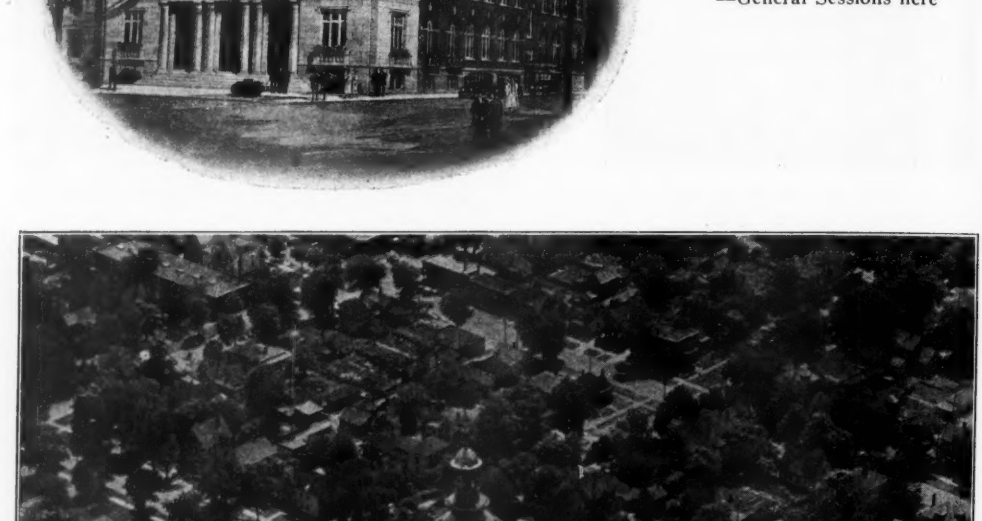
Memorial Hall—Illinois Centennial Building



Lincoln's Home

Knights of Columbus Building

—General Sessions here



Illinois State Capitol from the Air

Original Articles

POSITIVE AND PERMANENT IDENTIFICATION OF THE NEW BORN

GILBERT PALMER POND, B.S., M.D.,
OAK PARK, ILL.

The present day trend of increasing hospital births makes the possibility of mixing new born infants greater than ever before in the history of obstetrics. Hospitals and obstetric services have striven to lessen this possibility with the use of various methods and combinations of methods and have kept the number of cases of mixed identity surprisingly low, but each new case of mixed identity, especially if it has received newspaper publicity, stimulates the efforts of hospital authorities to devise a fool proof method. The various methods suggested and used up to recent date have been ably reviewed by a Cuban physician[1] in a paper read before the 17th American Convention of the International Association of Identification in Rochester in 1931. In that paper he states that he believes that of all the methods yet devised, the footprint is the most valuable.

Up to 1921 footprints were taken and filed with hospital records without any attempt at classification for ready reference. Such prints are valuable psychologically, but technically only for comparing a known baby with known prints during hospitalization. In 1921 Robinson[2] reported the use of classification of sole prints. In 1925 Montgomery[3] advocated the use of Wilder's[4] method of classification of sole prints and used it at the Madison General Hospital. Since then there has been no report forthcoming in medical literature of its continuence or workable value.

In September, 1932, Dr. Louis F. Alrutz of the obstetrical staff of the West Suburban Hospital considered the advisability of establishing footprints as ordinarily made in the routine protective measures of the hospital. The matter was brought to my attention and we both were doubtful of its value. I undertook an investigation of infant identification and the subsequent work was made possible by the hearty cooperation and encouragement of Dr. Alrutz.

Not being satisfied with merely disproving the value of footprints for wrinkles and measurements, it was decided to make an intensive study of footprints with the idea of using the Wilder[4] method of sole print classification advocated by Robinson[2] and Montgomery.[3] This led to a general study of the papillary ridge integument of the soles, fingers, toes and palms.

A series of careful sole prints was made with discouraging results for two main reasons. First of all there are so many fine wrinkles on the soles of the new born infant that the papillary or friction ridges are interrupted by them so frequently and at such short intervals that the patterns are rendered indistinct. Secondly, the sole patterns run up the side of the foot and up under the toes to such an extent that it is difficult to get all the patterns necessary for complete classification on a single print with any uniformity. It is my belief that while the method of classifying sole prints devised by Wilder[4] and advocated by Montgomery[3] is adequate and comprehensive it is too difficult for average hospital use where trained workers are unavailable.

I disagree with Cummins[5] who takes the ground that the hospital's responsibility rests solely in giving a mother her own child and proving the identity in an immediate disputed case. I believe that the hospital is essentially an institution for public benefit, with that benefit paid for by the public either by pay for services rendered or by charitable contributions, and that if a hospital takes prints of infants born within its walls for the protection of its reputation and to protect itself against litigation those prints should be available within reason to the public in a form allowing ready reference even over a period of many years. This is a humane service in cases of dire distress and can only be adequately accomplished by a comprehensive method of classification. Therefore classification became a paramount object in finding or devising a suitable method of infant identification.

A summary of conclusions of the investigation up to this point were as follows:

1. That footprints for recording wrinkles were of scant value even for a period of ten days and of no value beyond that time.
2. That prints of the foot made to record papillary ridge patterns for classification purposes were not practicable.
3. That toe or finger prints were impossible because of the difficulty in securing perfect rolled

Read before the Chicago Gynecological Society, November 15, 1935.

prints of all ten tiny digits for classifying by the standard method.

Fig. 1. Ridges in the palmar skin flow in straight lines and curves forming groupings and patterns. These patterns occur in definite areas bounded in the most part by fixed landmarks. These landmarks are triangular arrangements of ridges at the bases of the four fingers, called "Deltas." The pattern areas are six in number, designated by Roman Numerals.

4. That no suitable method of infant identification has as yet been reported.

The problem of devising a new and suitable method of infant identification embodying a workable classification was then contemplated and in order to have a fixed object in view the following list of essentials for an adequate method was compiled.

1. Ease of making prints, preferably by one operator.

2. Clarity and uniformity of papillary ridge prints, preferably by simple impression rather than rolled prints.

3. Adaptability of print taking to birthroom routine immediately after birth before any mixing can occur.

4. A choice of area to be printed that is easy of access and where an abundance of patterns occur in a small space.

5. Relative simplicity of classification so that nurse, laboratory technician, or librarian may learn to make accurate classifications with a minimum of training.

6. A method of classification of ridge patterns of the chosen area that is adequate for universal application.

7. A classification method that easily lends itself to filing for ready reference for any length of time after the prints have been taken.

8. A print from the mother on the same card as the infant print to establish a record of relationship.

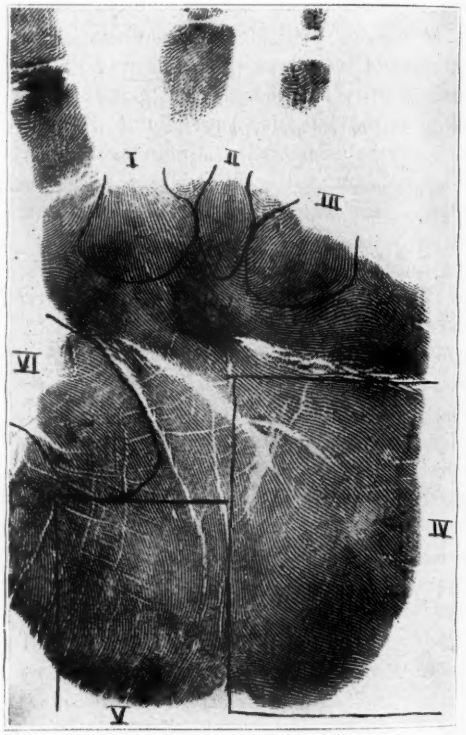


Fig. 2. The first three areas are in the interdigital spaces between the deltas and are numbered beginning at the index finger. The fourth area is the whole hypothenar area, the fifth is the thenar area, and the sixth is the interdigital space between the thumb and index finger.

For the purpose of classifying and recording the configuration of palmar ridges certain letters are used to designate pattern types. These letters are placed in bracketed spaces whose number corresponds to the number of the pattern area in which it is found.

When any area is devoid of patterns the corresponding area in the bracket is left blank.

9. A low cost of operation for the method.

A method fulfilling these criteria would not be intended to replace the bracelets and tags in

general use for nursery recognition of infants, but would be a positive means of identification held in reserve in case of disputed identity or loss of identity not only for the duration of hospitalization but for the life of the infant. It would be equal in value to the fingerprint method of identifying adults, which is not applicable to infants.

Application of these standards to all papillary ridge bearing surfaces of the human body elim-

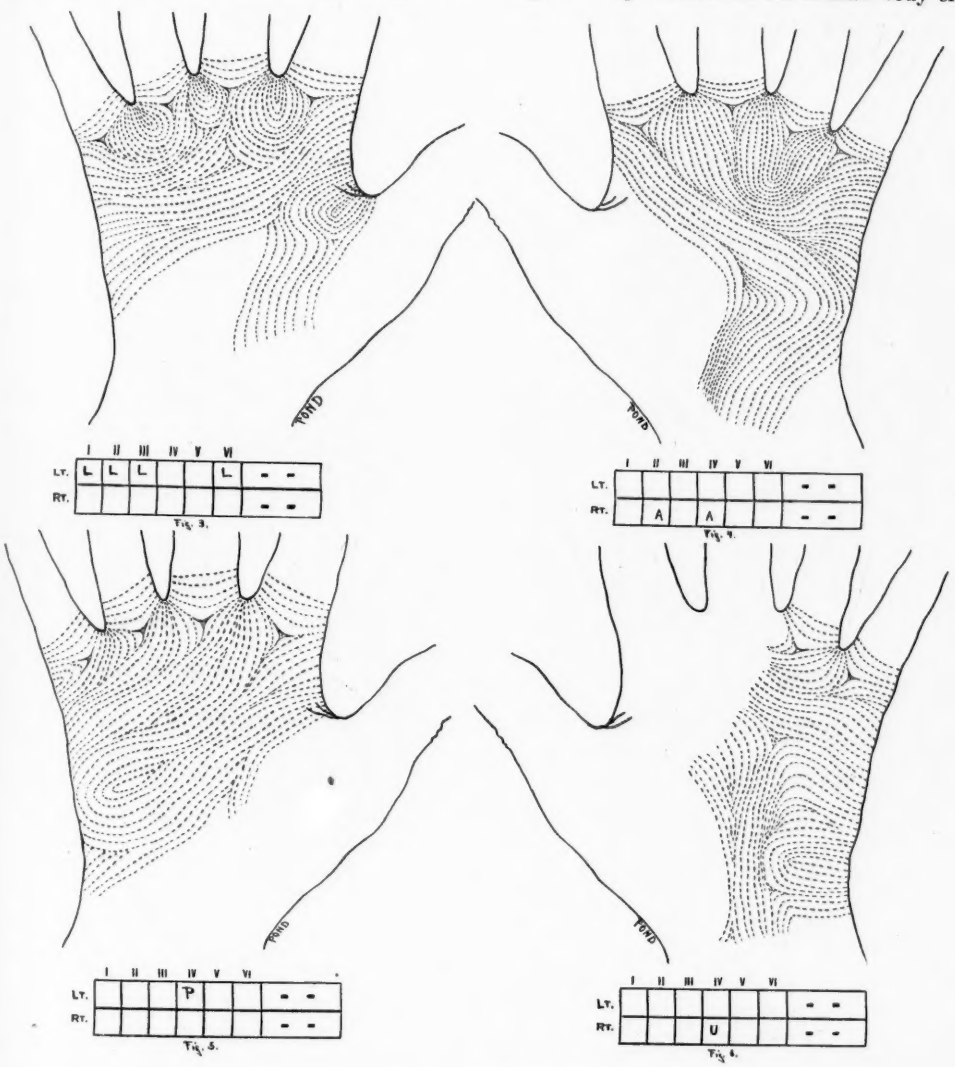


Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

"L" Loop Patterns

Fig. 3. Patterns designated by the letter "L" are found only in the interdigital spaces, i. e., areas I, II, III, and VI. These are simple loops, with either free or closed ends which are directed from the interdigital space toward the center of the palm. The ridges forming the loop originate in the space between the fingers, sweep down to form the one side, curve around with convexity toward the palm, then sweep back up and end in the same interspace from which they originated.

"A" Arch Patterns

Fig. 4. Occasionally a loop-like pattern occurs in which the open ends do not originate in the same area, i. e., one end of the pattern will come from one interspace and the other end will be found to pass out in an adjacent area. This is called an "Arch Pattern" and is designated by a letter "A" placed in the bracket space corresponding to the first area in which the pattern occurs. Thus if the arch begins in the second area and ends in the third the designating letter is placed in the second space in the bracket. When the arch is in the fourth area one end is usually in the palmar area and the other in the carpel area. The designating letter is placed in the fourth space in the bracket.

"P" Palmar Loops

Fig. 5. Loops whose ridges originate near the center of the palm with their convexity in or pointing toward the hypothenar area are called "Palmar Loops" and are designated in the bracket by the letter "P". These occur in the fourth area only.

"U" Ulnar Loops

Fig. 6. Loops whose origin is at the outer or ulnar border of the hypothenar area with the convexity toward the center of the palm are called "Ulnar Loops" and are indicated in the bracket by the letter "U." These are found only in the fourth area.

inated all areas except the palms which have never been reported in the literature with regard to infants and only meagerly in regard to adults and the only palm classification extant was found to be inadequate and impracticable.

This classification of palm prints is described by Wentworth and Wilder.[4] Their method of classification is quite technical having a numerator and denominator for a single palm. The numerator visualizes the palm at a glance in one

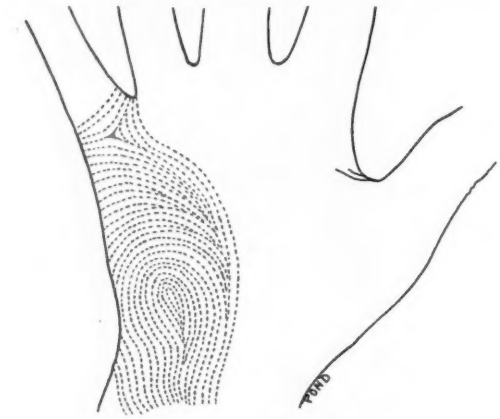


Fig. 7.

Fig. 8.

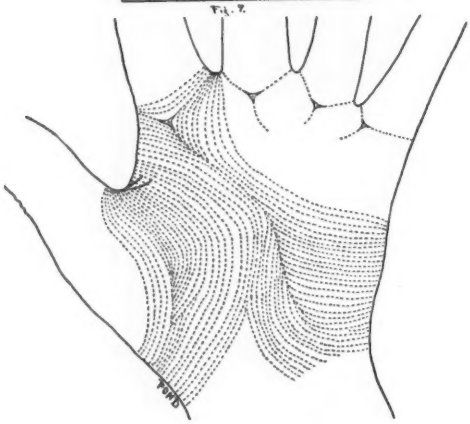


Fig. 9.

Fig. 10.

"C" Carpel Loops

Fig. 7. Loops originating in the carpel area, at the heel of the hand, with the convexity upward and usually outward are called "carpel loops" and are indicated by the letter "C". These occur only in the fourth area.

"R" Radial Loops

Fig. 8. Loops occupying the thenar or fifth area originating on the radial side are called "Radial Loops" and are indicated in the bracket by the letter "R"

"D" Dendritic Patterns

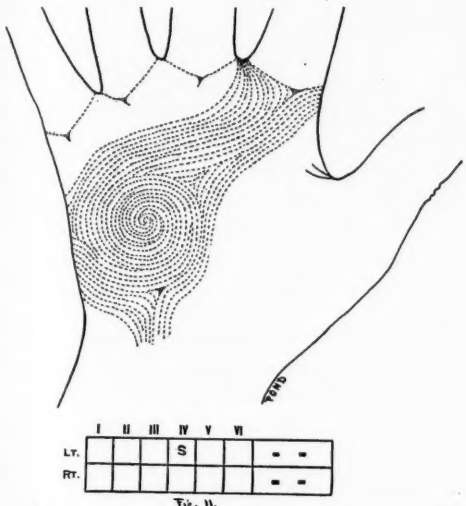
Fig. 9. When there is a definite grouping of ridges in the form of a branching, and when there are ten or more branches originating from the main stem on one or both sides of the stem, the pattern is called a branching or "Dendritic Pattern." Dendritic patterns occur in each of the first five areas. Dendritic patterns are indicated in the bracket by the letter "D."

"W" Whorls

Fig. 10. Patterns formed by ridges in concentric rings are called "whorls." These have been found most often in the fourth and fifth areas, but they may occur in any area. Whorls are indicated in the bracket by the letter "W."

Phylogenetically the whorl is the most primitive form of pattern. All other patterns are derived from the whorl.

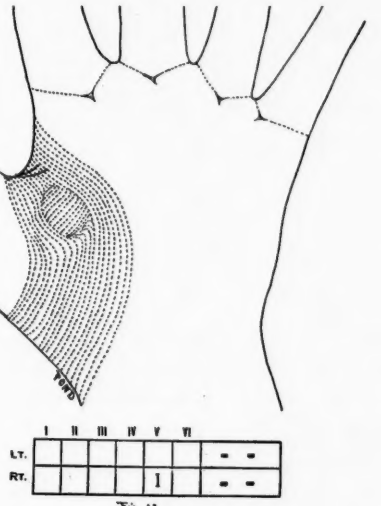
respect, but the print must be complete even to the center of the palm to obtain the formula. Then to find the denominator one must refer to a table almost in logarithmic fashion, after which, if one desires to reconstruct the palm from the formula (or in other words visualize it)



"S" Spiral Whorls

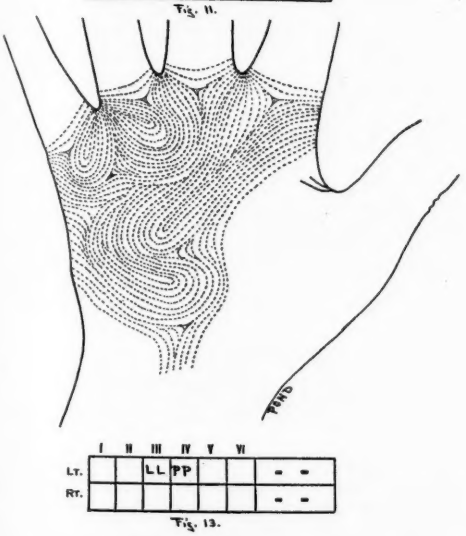
Fig. 11. When a whorl pattern is not concentric, but is composed of spirally expanding ridges about a central point it is called a "Spiral Whorl" and is indicated in the bracket by the letter "S."

Phylogenetically this is the first step in the conversion of the whorl into other patterns. The next step is the loop, and finally the arch (which see).



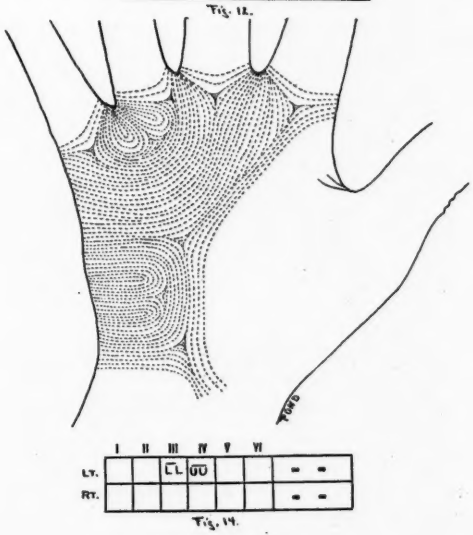
"I" Inlay Patterns

Fig. 12. Occasionally there is found in the fifth area or at the junction of the fifth and sixth areas a series of sharply defined ridges lying at right angles to the general flow of ridges of that area. This is called an "Inlay Pattern" and is designated in the bracket by the letter "I".



Twin Patterns

Fig. 13. Occasionally there are found in one pattern area two separate and distinct, but identical patterns. These are called "Twin Patterns" and are designated in the bracket by two designating letters of the same kind such as, "LL," "PP," etc.



Combined Twin Patterns

Fig. 14. When two similar patterns occur in the same area which are *not* separate and distinct, but which are united or combined they are called "Combined Twin Patterns". Two loop patterns may be combined by a larger loop which embraces both, or, diverging ridges forming a dendritic pattern may converge again to form a second "D." These combined forms are indicated by a line over the top of the two designating letters, as "$\overline{LL}$," "$\overline{DD}$," etc.

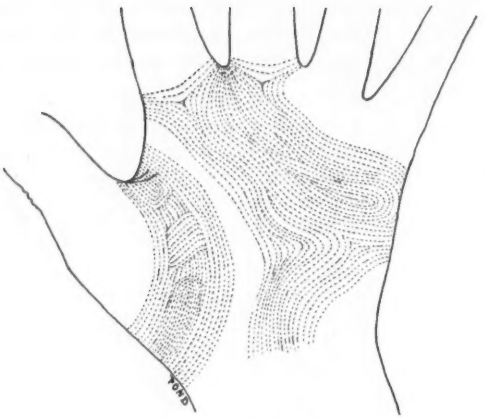


Fig. 15.

Fig. 16.

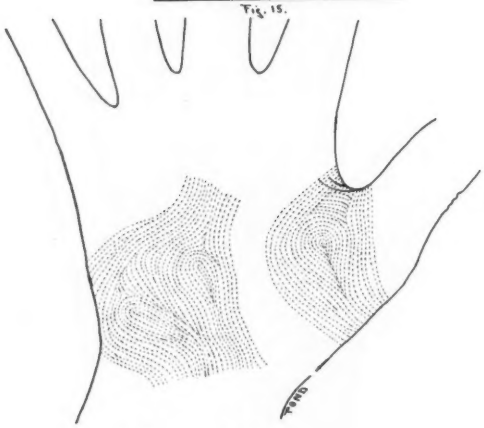


Fig. 17.

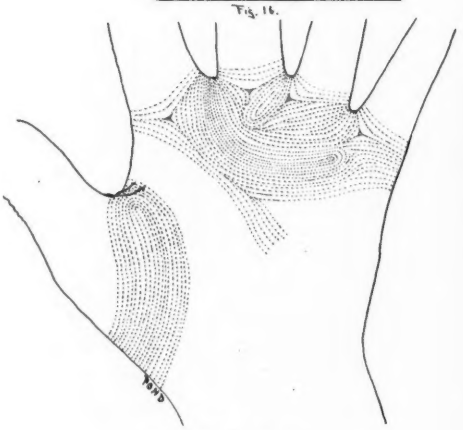


Fig. 18.

Double Patterns

Fig. 15. Frequently two separate patterns of different form are found in the same area. These are called "Double Patterns" and are designated by two designating letters in the same bracket area. The upper pattern is always given first. The above chart illustrates many, but not all the combinations that occur.

Combined Double Patterns

Fig. 16. The ridges of one pattern of a double group in one area may flow into and form part of the second pattern of the double group, thus uniting or combining the two. This form of double group is called a "Combined Double Pattern," and is indicated in the bracket by the two designating letters with a line above them, as "$\overline{DL}$," "$\overline{PU}$," etc. The above chart illustrates many, but not all of the possible combined double groups.

Triple Patterns, Separate and Combined

Fig. 17. Rarely three patterns are found in one area. This occurs mostly in the fourth area, but may occur in others. Four patterns in one area have actually been found, but for classification purposes three is taken as the limit. In dropping a pattern from the classification formula the least important one is dropped which is usually the dendritic pattern. (See Fig. 17. In reality the combination would be DACC, but is put as CAC.)

Displaced Patterns

Fig. 18. Occasionally a pattern, particularly a loop pattern will appear to be in one area but by tracing its origin it will be found to really belong to another, i. e., a loop may have its origin in one area but the convexity may be in the adjacent, or even in the second area from its origin. These are called "Displaced patterns". In the bracket the designating letter is put in the area of its origin and an arrow pointing to the area of displacement. Arrows are used only to indicate displacement.

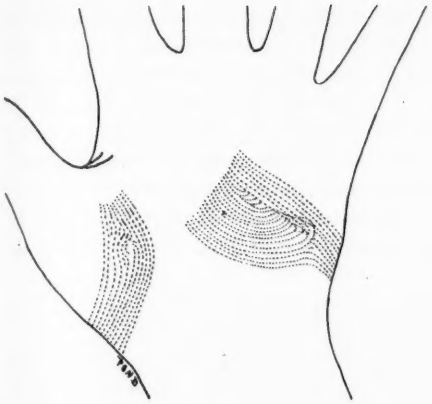


Fig. 19.

Accidental or Abortive Patterns

Fig. 19. Occasionally a pattern is encountered which is not exactly classifiable as one of the ten listed single patterns or their combinations. There will be a resemblance to a listed pattern, but yet cannot rightly be called such. These are called "Accidentals" and are indicated in the bracket by an "X" followed by the letter which indicates the pattern they most resemble. If the resemblance is uncertain and possibly dual then a reference is made to the second resemblant pattern above the bracket for the left palm and below it for the right. This is to facilitate the search for an unknown.

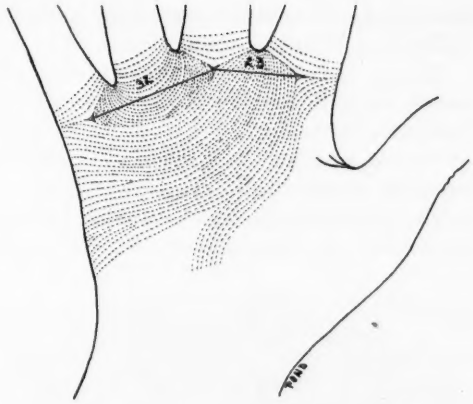


Fig. 21.

Fig. 21. Occasionally the third delta is missing. In that case the ridge count is made by counting first the number of ridges between the first and second deltas, then using a "zero" to designate the second count, and finally counting the ridges between the second and fourth deltas, which constitutes the third count.

it is necessary to refer back to the table and read it backwards. Furthermore, in obtaining the numerator, although the method is clear, there is room for a good deal of latitude of interpretation that is left to the judgment of the interpreter, which would lead to confusion and many disputes in a series of interpretations made by different workers.

This method also does not take into consideration several pattern groupings found in a relatively large percentage of palms. In fact one very common configuration is not mentioned at all by the authors of this method to say nothing of several others which occur less frequently, but often enough to necessitate their inclusion in a classification method.

This criticism is not intended as a criticism of the method as an aid to morphological study,

In the accompanying print the third delta is not only missing, but there are no patterns at all. When the third delta is missing no patterns can occur in either the second or third areas.

Ridge Counts

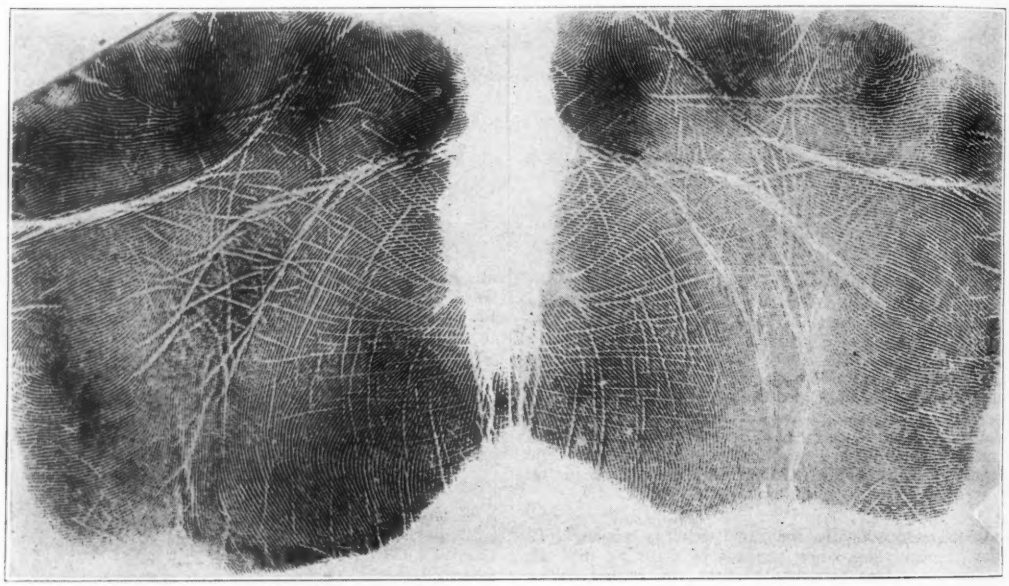
Fig. 20. The second part of the classification is made by counting the number of papillary ridges occurring between the four deltas. This gives three numbers which are read in order from index delta to little finger delta, (first to fourth deltas). These numbers are placed in the classification bracket after the letters which describe the patterns.

but is intended as a criticism of the method as to its adaptability to hospital routine.

In spite of a discouraging outlook infant palm prints were attempted with such gratifying results that in October, 1932, work was begun on perfecting a printing technique and the devising of a new classification.

The principal difficulties encountered were in holding the tiny palm open and flat for printing and the removal of the vernix caseosa which tends to fill the grooves between the ridges thereby making a smudge instead of a clear cut print. A steady hand, a little ambidexterity and practice are all that are necessary for one operator to secure clear prints using printer's ink rolled out on a plate. Wiping the infant's palms with dry gauze within fifteen minutes after birth or before the vernix is dry is usually sufficient to remove it, but if the vernix adheres or is dry hydrogen peroxide will remove it harmlessly. Grease may be removed with benzine. If the ridges are swollen or water-logged, sponging with alcohol after the peroxide dehydrates them and makes them stand out clearly.

In the beginning of this work many of the prints revealed the ridges as rows of dots rather than continuous lines and in others there were merely masses of dots without configuration. Montgomery noticed this same apparent lack of ridges in some of his sole prints and believed that it was not an error of technique but that the papillary ridges had not yet matured to form definite ridges. It has been found in this investigation that the apparent lack of ridges in



	I	II	III	IV	V	VI	
LT.		A	L	P			40-36-33
RT.			L				42-36-36

Fig. 22. This figure illustrates a completely classified pair of palms.

The filing is done on the basis of the left hand, using the sixty-four primary combinations of occurrence of patterns as the sixty-four primary divisions of the file. Cards printed in black are for males and those in red for females.

A card 8 x 8 inches has been chosen as the most satisfactory because it allows two prints of each hand on one side and because it is the standard size for finger prints, therefore file cabinets can be bought ready made for that size.

Telegraphic report of a formula may be made without the bracket by using a zero in each space where no pattern occurs. The above classification formula would then read: Lt. OALPOO 40-36-33, Rt. OOLOOO 42-36-36.

some cases is definitely an error of technique, and that the error rests in the improper and insufficient removal of the vernix caseosa. I have yet to find a case in which the ridges cannot be clearly printed after proper cleansing, except where there is extensive exfoliation.

Not only has it been possible to make clear prints of palms of all normal new born full term babies, but this investigator has secured clear and classifiable palm prints of infants born prematurely. One print has even been secured from a still-born fetus of four and a half months gestation in which fully developed papillary ridges forming a pattern can plainly be seen.

The technique of obtaining palm prints is simple and may be done by one operator. The infant is placed on its back on a table with its feet toward the operator. The infant's left arm is raised with palm up and the operator slips his right index finger under its four curled fingers while his remaining fingers are at the back of the infant's hand. The infant's fingers are straightened out by holding them between the operator's index and middle fingers and bent slightly backward. The thumb is then bent backward and is held between the operator's middle and ring fingers. This holds the infant hand open and steady and at the same time flattens out the palm unfolding the transverse creases. If longitudinal creases remain the infant fingers may easily be separated and held separate between the operator's index and middle fingers. In this position the palm may be cleansed and dried for printing.

The ink plate consists of a ply-wood board six or eight inches square with a handle attached to its back and a glass plate cemented to its front surface. Printer's or lithographer's ink is rolled out in a smooth layer on the glass. The ink film must be thin enough to read ordinary news print through it. If the ink film is too thick the grooves between the ridges will be filled with ink and a smudge will result.

The ink plate is applied face down upon the upturned infant's palm either with simple flat pressure or with a slight rolling motion from the heel of the hand to the base of the fingers.

To a second board, the size of the card to be used for recording the prints, which has a handle on the back but no glass, the print card is applied and held in place by rubber bands. The print board with card attached is then pressed upon the infant palm in the same manner as the ink plate.

The right palm is then held in position for cleaning and printing by reversing the process. Most people, with a little practice, can develop enough ambidexterity to do this.

The prints should be made in the birthroom a few minutes after birth before either the infant or mother have left the birthroom or another infant or mother has been introduced into it. The prints of one or more fingers of each hand of the mother should be placed on the same card as the infant's palm prints. This will provide a permanent record of the infant and will connect it indisputably with the mother.

The printing should be delegated to the supervising nurse staff of the obstetrical department, who may become adept and proficient, and not to pupil nurses or interns who are periodically entering and leaving the department.

The devising of a classification of palm patterns fulfilling the standards laid down required a thorough basic knowledge of fingerprint classification, an abundance of imagination, and infinite patience. It was deemed entirely possible for such a method to become national or even international in scope, hence the classification was planned to be workable for a number of prints equal to the population of any civilized nation. The classification herein proposed is adequate for well over three hundred million prints. The method used for fingerprints generally is adequate for about one hundred and sixty million.

This classification is admittedly based upon the experience of fifty years of scientific fingerprint classification with the use of fingerprint terms where they may rationally be applied to the palms.

Twelve hundred and fifty pairs of adult palm prints were collected and studied from which the classification was evolved. At the same time five hundred pairs of new born infant palm prints were collected, classified, and filed.

A ten per cent. check of the accurateness of the method was made by a second operator making fifty prints at random from the five hundred infants. These unnamed prints bearing key numbers were held until the five hundred were classified. The unknowns were then classified and identified out of the five hundred without a

single mistake and the average time for identifying an unknown was less than ten minutes.

The classification is based upon the occurrence of patterns in six definite areas of the palm. These areas are where walking pads occur in lower animals. Wilder has shown that when primates became arboreal they needed friction surfaces instead of pads so papillary or friction ridges developed and the pads evolved into ridge patterns. In the lower simians there are identical patterns in the form of whorls in all six areas. In the higher apes and man where arborealism has largely disappeared the patterns have degenerated into various forms or have disappeared entirely. The average number of patterns to a palm in man are between two and three. Five patterns on one palm is the highest number I have observed while several palms with no patterns at all have been seen.

With six areas where patterns may or may not occur there are sixty-four possible primary combinations without regard to the types of patterns. There are ten basic types of patterns half of which may occur in any area, the remainder being peculiar to their own areas. This raises the possible secondary combinations well into the millions.

In addition to the patterns there are four fixed points called deltas which are found at the base of each finger with one exception and between them there are varying numbers of papillary ridges. The count of the ridges between adjacent deltas give three numbers which form the tertiary or fine divisions raising the possible combinations well over three hundred million.

For hospitals with a birth expectancy of less than fifty thousand in a generation the first two divisions without the ridge count would be adequate unless the method became universal. This might be designated as the short classification.

The recording of the classification is accomplished by placing a letter designating the type of pattern in a space in a bracket corresponding to the area of the palm followed by the ridge count numbers. This visualizes the palm at a glance which is a great aid in the search for an unknown.

In devising this classification it has been necessary to arbitrarily set certain standards or rules in order that there may be uniformity of purpose regardless of who makes the classification of a certain print. This is imperative to the success of the method and the avoidance of confusion, so I have compiled a set of descriptive rules, illustrated with actual prints and drawings, which constitutes the basic authority for the method.

Summary. All available literature on infant identification has been reviewed with special reference to footprints, and the latter have been found inadequate.

A technique for printing new born infant palms has been perfected and an entirely new classification of palm prints has been devised for the purpose of establishing a standard method of positive and permanent identification of the new born infant for general use.

CONCLUSIONS

The more one delves into this problem the more one is impressed with the possibilities and the far reaching effect of such a method.

If this method were generally adopted;

It would provide an incontrovertible proof of birth for the life of the individual and all persons would carry the proof of birth and of their identity with them at all times in the prints of their palms.

It would protect hospitals and parents against the possible mixing of new born infants.

It would provide a means of identifying abandoned children and foundlings and would consequently deter abandonment.

It would provide a means of identifying returned kidnaped children, regardless of time, either dead or alive.

It would provide a means of identifying unclaimed children after major disasters such as the San Francisco earthquake or Iroquois Theatre fire where thousands were unidentifiable.

It would provide a means of identifying all unknown dead after a generation of prints were on file.

It would preserve the identity of all children during the first years of life when the possibility of loss of identity is the greatest.

It would provide a record of relationship between the infant and its mother.

It would disprove false claims of parenthood of a given infant.

It would eventually be as acceptable in courts of law as finger prints are at the present time.

It would be devoid of the odium popularly attached to fingerprints.

In short it would provide a "birth certificate" par excellence.

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DISCUSSION

Dr. Fred H. Falls: I do not think that a paper like this should go without discussion. I think identifying babies by means of footprints has been very disappointing. Some years ago we tried to mix up 100 sets of footprints and then unscramble them and we found it could not be done.

Since we have not had any experience with Dr. Pond's method, we have to take his word for the findings. I think that considering the analogous work the government has done with fingerprinting, such a method as Dr. Pond has described is practical. I think we ought to take it up immediately and see if we can have the same success as has attended his efforts. It is a very important thing to find out whether this is practicable or not. We are indebted to Dr. Pond for presenting this work.

Dr. David Hillis: It is of course true that the taking of footprints is nothing but a pleasant gesture without any value for identification but which gives the patient a souvenir of an important event in her life. It seems to me that a plan of this kind is most excellent. It is more accurate and dependable than any other which has been proposed.

I would like to ask Dr. Pond if, when such a plan is adopted, a hospital could simply take good palm prints, file them with the records without classifying them and depend upon some of its people familiar with this work to pass on them in cases of doubtful identity. In other words it would be necessary for each hospital to train someone to read palm prints intelligently in order to use the method. I cannot see why any hospital today that is using the footprint method should not adopt this plan which would not involve any additional cost and would really be of great value.

Dr. Gilbert P. Pond (closing): The printing of the palms is exceedingly simple. It is more simple than printing the foot. As I have seen footprints made, one nurse would hold the baby and another nurse would put the foot on the ink plate and then on the card; instead of putting the baby's foot on the ink and card, I put the card on the baby. The baby lies before me on the table with feet towards me. I lift the hand, take the ink plate, place it on the baby's palm, lay that down and put the card on the palm. The card is held on the board by rubber bands. It is very simple and very easy to do. One operator can print ten babies in 15 or 20 minutes. I have done it many, many times and I have taught nurses to make the prints. At our hospital the supervising nurses are making these prints on every baby born there.

It is possible to make these prints and file them away without classifying them. They are far better than footprints as they are taken now because any fingerprint expert could definitely identify an unknown print from a group of prints in the hospital. If, for instance, there was a mix up and you knew this baby had one of two names it would be very simple to identify the baby positively in a very few minutes and a fingerprint expert could do it in a very short time. I know these palm prints will be accepted in court because the courts in Nevada had accepted a print of the palm as evidence the same as they would accept fingerprints. The judge said anyone who had specialized in papillary ridges could qualify as an expert in any ridge bearing surface. The principal reason for classifying is to be a help to the community in general. Take the case of a kidnapped child; there would be no question whatever of the identity of children brought in as to whether the desired child had been found or not.

VINYL ETHER OBSTETRIC ANESTHESIA FOR GENERAL PRACTICE

Wesley Bourne, Montreal (*Journal A. M. A.*, Dec. 21, 1935), points out that since the more extended employment of vinyl ether in his clinic there has been no question of untoward effects; its entire suitability for use in obstetrics has become very convincing, and although those patients who have had it by the "open" method have done well enough, there can be no doubt that it is better to administer vinyl ether with oxygen, if for no other reason than that every anesthetist knows something of the benefits of adding oxygen to anesthetic vapors. The extreme volatility of vinyl ether is such that it is very wasteful to give it by the "open" method. It is therefore preferable to employ a closed-system apparatus, fitted for supplying oxygen and for absorbing carbon dioxide, so that a very small quantity of anesthetic will suffice for the longest case; in other words, the longer the anesthesia the smaller will be the quantity used per unit of time. Such an apparatus should be cheap and should in a short time more than pay for itself by precluding waste of material. The author concludes that when vinyl ether is used to produce anesthesia sufficient for obstetric procedures, it apparently does not cause liver damage nor does it interfere with muscular activity in the intestine and in the uterus. Vinyl ether seems to be particularly suitable for obstetric anesthesia in general practice on account of its safety for mother and child, its ease of administration, the rapidity of its action, the satisfactory maintenance of any desired degree of narcosis, and the early uneventful recovery.

SIMPLICITY VERSUS COMPLICATED METHODS IN THE RECONSTRUCTION OF PENDULOUS BREASTS

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CHICAGO

Unfortunately, the term "plastic surgery" was forced by quacks into disrepute in the ranks of ethical surgeons, for a number of decades. The thought is stimulating, however, that on the European continent, serious minded surgeons, through an educational campaign, encouraged research and enlightenment in this direction. In this country, the Society of Plastic and Reconstructive Surgery and the creation of chairs for the teaching of plastic surgery in various universities has done much to develop this branch of surgical endeavor.

A bird's-eye view of the history of this phase of surgical work may not be amiss in this connection.

Durston was first to describe, in 1669, the clinical entity now known as hypertrophy of the breast and mastoptosis. Nearly a century of silence prevailed in the literature until Velpeau in 1857 and Labarque contemporaneously studied the subject anew. In 1898 Michel and Pousson excised the upper half of the breast, making a half-moon shaped excision, beginning at the axilla and extending to the sternum in a case of double hypertrophy of the breast in a young woman. Verchére followed suit in 1898 but excised a lateral triangular section of the breast. In 1907 Morestin resorted to discoid resections of the hypertrophied or ptosed breast. In the following year Dehner excised an elipse of skin in the upper half of the breast and suspended the gland to the periosteum of the third rib after splitting the pectoralis major and minor muscles. In 1909 Girard described the submammary incision already reported in 1903 by Guinard and which Gaillard Thomas used for the purpose of removing tumors as early as 1882. Girard suspended the breast on the costal cartilage of the second rib. Villandre was first, in 1911, to transpose the nipple, through a buttonhole opening into a higher position; this method was later practised and described by Passot and Dufourmentel. In 1912 Lexer resected the hypertrophied breasts and sacrificed the nipples. Kausch, in 1916, endeavored by circular resection to remedy hypertrophic conditions of the breasts.

In April, 1921, I reported my experiences and results in free transplantation of the nipple and areola supplemented by resection of the hypertrophied breasts, before the North Shore branch of the Chicago Medical Society and published a paper on the subject in November of 1922.[1] In 1923 Lotsch reported that he elevated and resected the breasts through a longitudinal "slit incision" above and below the mammilla. In 1924 Hollender combined the methods of Pousson and Verchére. In 1925 (March 11) Passot, and on March 25 of the same year, Dufourmentel reported on the subcutaneous transposition of the nipple. In 1925 Joseph published his case of mastomiopexy which he performed in 1922 by double wedge-shaped excisions of the breast with the retention of a bridge of skin to insure nutrition to the nipple. In the same year Lexer and Kraske, and in 1926 Axhausen, described plastic resections of the hypertrophied breasts.

In 1927 Joseph described his two-stage, and later in the same year, his three stage operation. In 1928 Biesenberger published his plastic operation with surgical torsion of the breast and in 1930 Schwarzman elaborated on the Joseph technic.

Erna Glässmer of Heidelberg resected, in 1930, lateral and supramammary sections of skin and breast tissue and thus endeavored to diminish the size of the breast and accomplish its elevation.

Dartigues, Claué and others added refinements of technic of some type or another.

I have pointed out the possibility and feasibility of completely disconnecting the nipple and its areola from its subjacent bed and successfully transplant them to a new position selected at the proper level of the breast, at the same time reshaping the organ to its natural contour, following resection of excessive mammary tissue. With proper technic, such ablation and free transplantation of the nipple aiming at careful avoidance of injury to the highly specialized tissues of the nipple, necrosis may be avoided and satisfactory vascularization and taking of the nipple anticipated with confidence.

Read before the Society of Plastic and Reconstructive Surgery at Atlantic City, N. J., June 15, 1935.

The technic of this operation may briefly be described as consisting of

(a) a supra-areolar convex incision over the anterior hypertrophied and pendulous gland with a second, similarly directed incision beneath the global mass; (b) removing between these incisions as much of glandular and adipose tissue

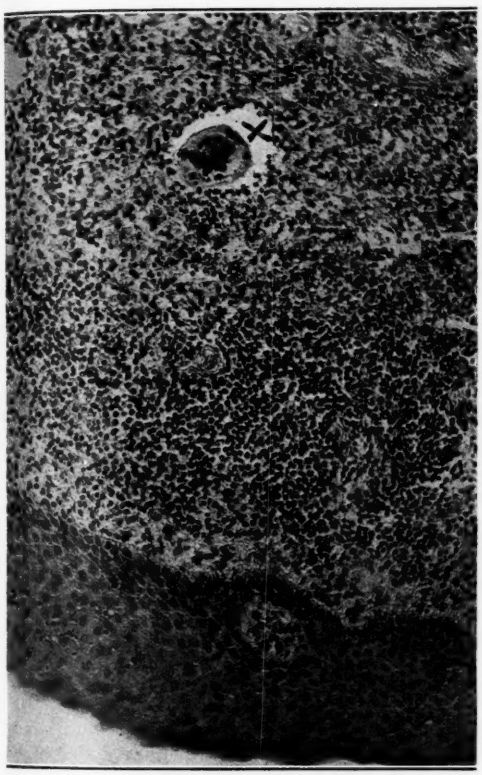

Fig. 1. Transplantation of the nipple. Low power magnification. The nipple structure is intact. Round cell infiltration in the immediate vicinity. There is one isolated area of an epithelial nest of cells; (X) the result of introducing microscopic portions from the skin during the operaton.

as is deemed necessary to obtain the desired size and contour; (c) free circular detachment of the nipple and areola through a circular superficial incision. The subdermal tissues of the nipple must be treated with utmost gentleness. Transplantation of the nipple is then made into a bed prepared at the site previously selected.

Surgical artistry and special technical skill are requisite for these procedures if one's aim is to obtain a well formed new breast-contour and to avoid unsightly lumps and disfiguring scars.

In the great majority of my cases thus treated there was clinical evidence of good cosmetic result and there was no doubt regarding the viability of the freely transplanted tissue. However, it was not until recently that I had the opportunity of obtaining complete histological verification of this statement.

In 1930, a woman on whom I had executed a plastic operation on the breasts, including nipple transplantation, again came under my care two months later. With the patient's consent a small

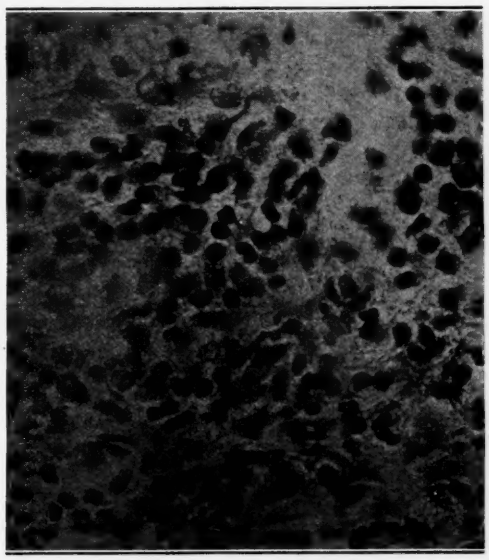

Fig. 2. Transplantation of the nipple. High power magnification of Fig. 1. The cells are intact in the skin of the nipple as are those in immediate contiguity. Round cells, a few polymorphonuclears and some plasma cells are seen.

section of the transplanted nipple was removed for biopsy, which gave the following result:

The epithelium was found intact and the corium containing round cells with few polymorphonuclears and some plasma cells. As is seen in Fig. 1, there is an isolated islet of epithelial cells. This is in all probability due to the implantation of some epithelial cells, the result of pinching off of these cells during the process of operative transplantation.

Following the acute reactionary process, the process transgresses into the subacute phase as is evidenced by some polymorphonuclear and a more extensive round cell infiltration (Fig. 2). When this area is examined under high power one observes the epithelial strata intact and immediately below this area, in the corium, there

are some round cells, plasma cells and some scattered polymorphonuclear leucocytes. This is seen to even greater advantage when a higher powered magnification of the corium is examined (Fig. 3). Here, the cellular elements and

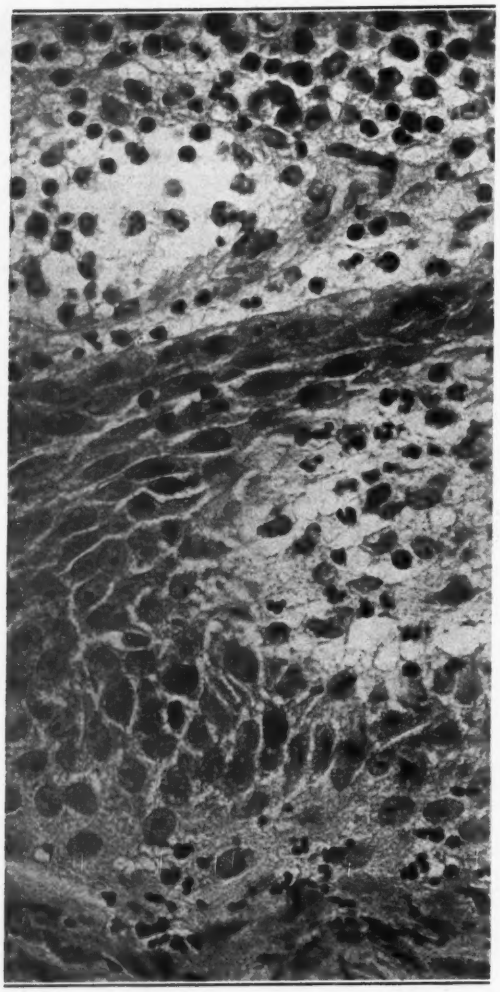

Fig. 3. Transplantation of the nipple. Higher magnification of the corium showing round cells, a few polymorphonuclears and some plasma cells.

the capillaries in the corium may be closely studied.

From these findings, it is quite evident that the transplanted nipple and areola have become vascularized and incorporated in the new site, as normal, living tissue. They further show that the operation of resection of superfluous tissue in hypertrophied pendulous female breasts, with free transplantation of the nipple and areola, is a practical one, and that, when carried out with proper technic, the result will not only be relief of the patient's disability, but also satisfactory from the esthetic point of view and of permanency. The transplanted nipple does not become absorbed nor die, but continues as normal, vascularized, living tissue in the vast majority of cases (Figs. 4-10 incl.).

In a properly performed operation, as I have outlined, the surgeon must not conclude if after a few days following the transplantation of the nipple the surface of the latter appears dark to even black in color. It does *not* signify failure of the nipple to take. On the contrary, in most, if not all, of the cases *where the technic has been faultless* and the postoperative care proper, the superficial discolored layer representing only the stratum corneum exfoliates, while the cutis vera goes on healing per primam. Figure 11 depicts the beginning of the separation of the horny layer of the skin, while Fig. 12 shows the same transplanted nipple after healing is complete. They are from the patient shown in Figs. 9 and 10. It may take from 4 to 7 weeks for the stratum corneum to separate. This, however, does in no manner hinder the patient from pursuing her usual vocation. The keynote to the postoperative treatment consists of dry asepsis (desiccating powder and sterile supportive dressings). See also Fig. 12a.

Patients seek relief from these disabling conditions (Fig. 13) which interferes with their earning a livelihood, some even developing psychoses from brooding over their disability (Figs. 14 and 15). In others where the condition is less pronounced (Figs. 16-19) esthetic and vocational reasons, force the patients to seek surgical relief.

Careful individualization and planning of the operation are necessary to obtain anticipated results although a great deal depends on the experience and skill of the surgeon as well as the cooperation of the patient in the pre- and postoperative care. While many successful cases are reported at the hands of the experienced operator, numerous unrecorded failures are attributed to surgeons engaged in plastic surgery. *One must ever be mindful that lack of knowledge of the subject, improperly selected cases, inadequate pre- and postoperative care may result in sloughing, abscess formation and even loss of life.*

A survey of the literature furnishes ample material to force the conclusion that the great multiplicity of operations suggested for the correction of hyperplastic breasts has thus far failed to yield a standard technic. Complicated procedures such as transpositions of the nipple other complicated procedures, capable of yielding good results in the hands of the originators of the respective method create a chaotic situation, eventuating in perplexity to the surgeon who asks "Which is the simplest method giving uniformly good results?"

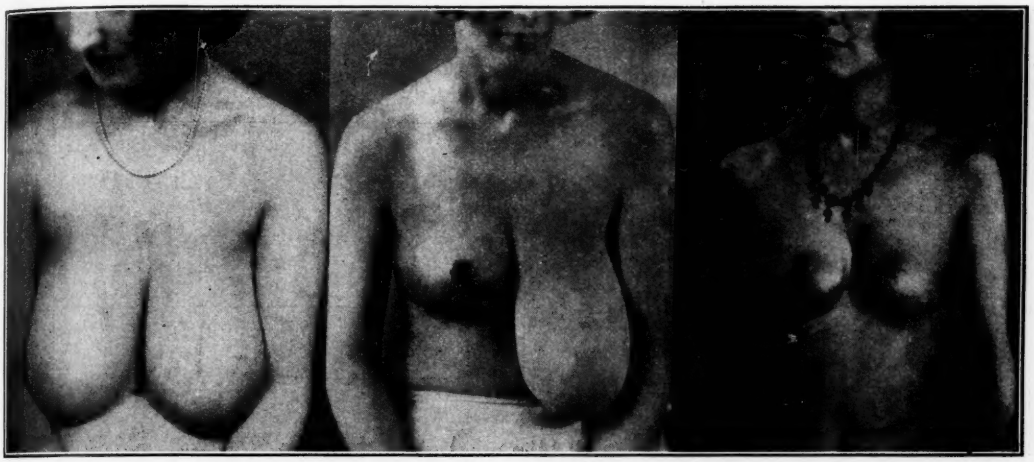

Fig. 4. Virginal hypertrophy of the breasts.

Fig. 5. Virginal hypertrophy of the breasts. Same patient one week after plastic resection with transplantation of the nipple.

Fig. 6. Virginal hypertrophy of the breasts. Same patient four weeks after operation.

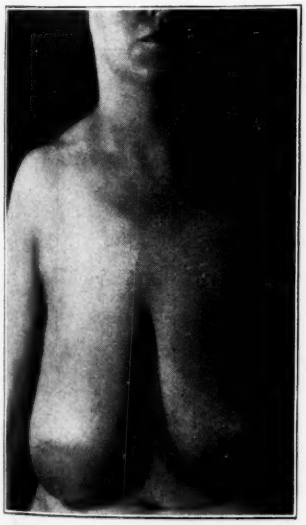

Fig. 7. Marked pendulosity of the breasts (vocational disability; eczema under breasts).

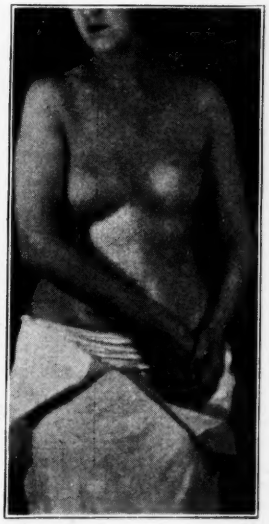

Fig. 8. Same patient after operation.

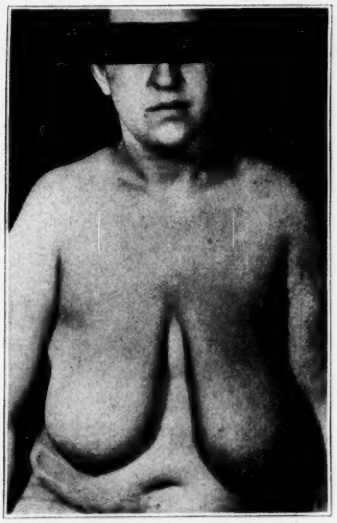

Fig. 9. Pendulous hypertrophy of the breasts in young woman.

(Fig. 20), two, three, and even four stage operations, partial resection with axial torsion of the remaining mammary substance and numerous

After a number of years of experience with most of the methods advocated, I conclude that good results are obtainable and depend upon the

simplest possible technic, meticulous asepsis, a thorough knowledge of anatomy and assiduous attention to detail.

Fig. 10. Same as preceding—about one month after operation.

Fig. 11. Beginning separation of the stratum corneum of the skin revealing the healed nipple underneath.

Distressing effects of hypertrophy of the breasts may be grouped as follows:

(a) Physical manifestations.
(b) Vocational incapacity.
(c) Esthetic drawbacks.
(d) Psychic influences.

(a) *Physical Manifestations.* The excessive size of the breast may cause considerable discomfort (pulling, dragging sensations intensified at the menstrual period) referred to as *masto-*

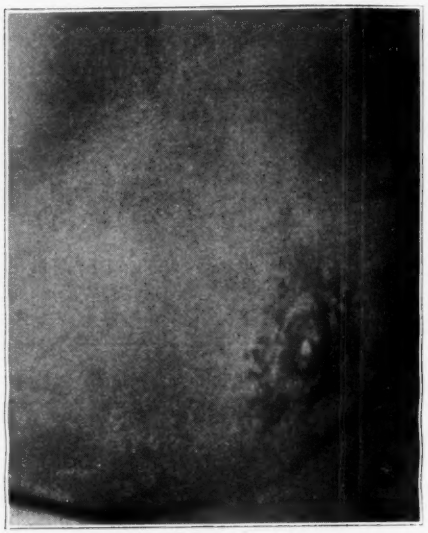

Fig. 12. Same as preceding case. Observe completely healed, transplanted nipple after separation of the superficial layers of skin.

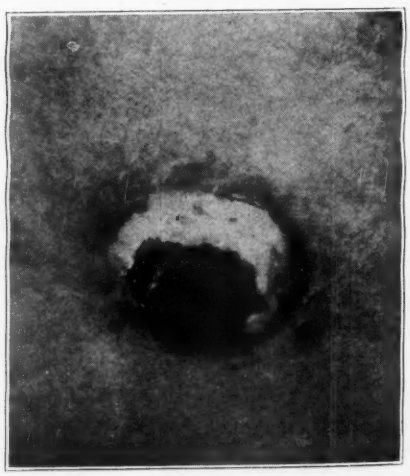

Fig. 12a. Close up of transplanted nipple five weeks after operation showing stratum corneum separating leaving the healed nipple structure united to the breast.

dynia by Girard. Circulatory disturbances have been described by Velpeau and in our times by Kraske (edema, discoloration, even ulcerations). Intertriginous eczema is not infrequently encountered, particularly in hot weather (crustation, inflammatory manifestations). Some authors (Axhausen) believe that markedly pendulous breasts are followed by untoward influences on the heart and lungs. The dragging breasts cause alterations in the vertebral column which may in aggravated cases lead to a greater or lesser degree of kyphosis.

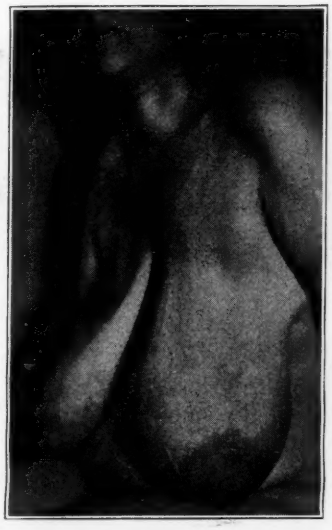

Fig. 13. Excessive hypertrophy of the breasts causing vocational disability.

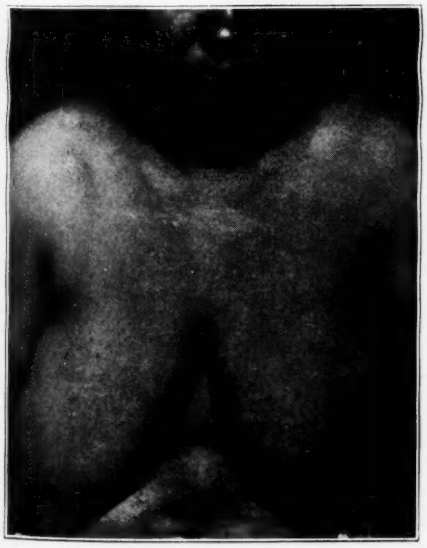

Fig. 14. Psychosis developing in a patient—the result of brooding over pendulous breasts.

(b) *Vocational Incapacity.* In this group belong dancers, public speakers and people of the stage and manikin models (so important a vocation in modern times).

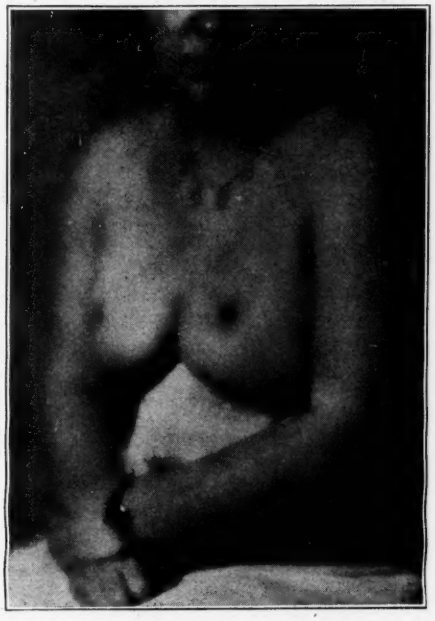

Fig. 15. Patient shown in Fig. 14 following operation. Recovery.

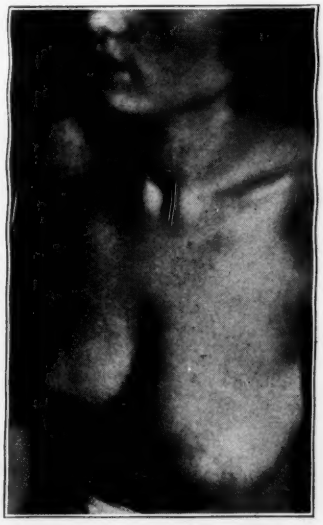

Fig. 16. Asymmetry of the breasts before operation.

(c) *Esthetic Drawbacks.* Women of refined esthetic tastes are superconscious of pendulous

breasts. A great drawback is created for those engaged in various outdoor athletic endeavors, swimming, tennis, etc.

(d) *Psychic Influences.* Conditions of inferiority, neuroses and psychoses may develop. Tendencies to suicide and actual attempts at self-destruction have been reported (Axhausen).

Fig. 17. Same patient as preceding 6 weeks after resection-suspension of the breast. Arrow points to semilunar scar partially obscured by powder.

Fig. 18. Pendulous breasts. Vocational disability (professional model).

A rather exhaustive study of the more or less complicated methods of Lotsch, Eckstein, Weinhold, Kausch, Lexer-Kraske, Hollander, Joseph and particularly that of Biesenberger has convinced me it is best to abandon procedures which

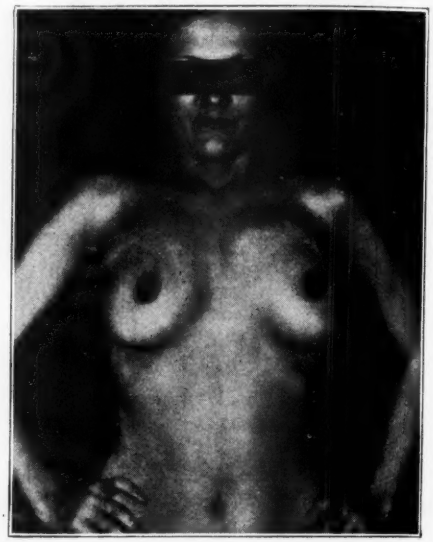

Fig. 19. Patient shown in preceding illustration six weeks after resection-suspension operation. Arrow points to crescentic supramammary incisions.

are difficult to perform and offer greater possibilities of failures than the simple method of resection of the breast with free transplantation of the nipple.

Summary

1. Patients often seek relief from excessively hypertrophied breasts and the train of symptoms accompanying the condition.

2. Surgeons desiring to relieve these patients should acquaint themselves thoroughly with the anatomicopathologic factors underlying the abnormality and the methods for their relief.

3. Good results usually follow properly executed operations but it must be remembered that amateur attempts at breast plastic have been followed by necrosis of the nipple; necrosis of the breast tissue and suppurative conditions and their sequelae.

4. The simpler the technic the better the results.

5. Patients should be told that with transplantation of the nipple lactation is precluded.

6. When the pendulosity is moderate a transposition operation may be carried out successfully.

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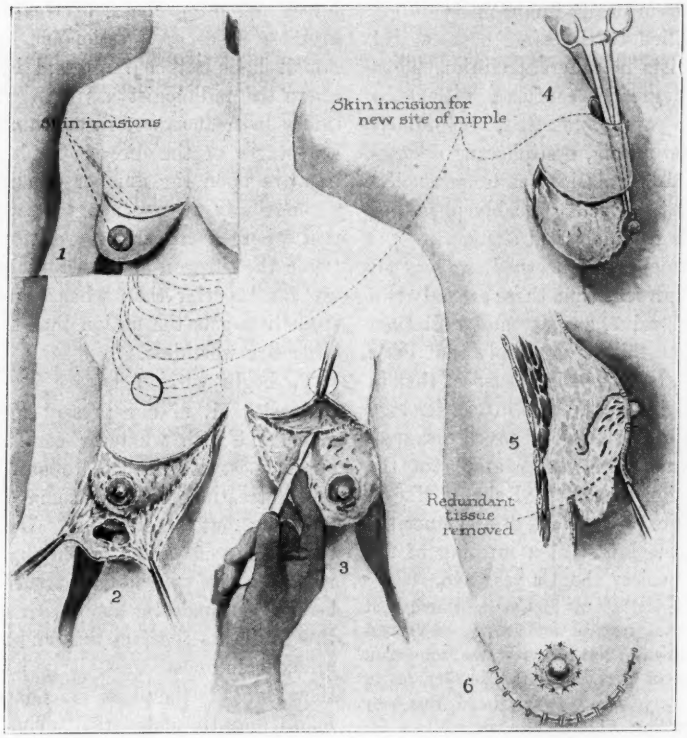

Fig. 20. Transposition of nipple with resection of the breast. Two stage operation.

THE ROLE OF RADIATION IN THE MANAGEMENT OF CARCINOMA OF THE BREAST

JULIUS BRAMS, M. D.

CHICAGO

At the present time there are approximately 500,000 people suffering from cancer in the United States, and there are about 150,000 deaths from cancer each year. Last year in the state of Illinois alone there were approximately 10,000 deaths from malignancy of the various organs. During the past twenty-five years there has been an increase of about 100% in the reported mortality. A disease as prevalent as cancer and responsible for such a high death rate naturally makes up a large part of our medical literature and discussion, but with all this, very few actual facts are known and there is little that is definitely accepted with reference to any phase of the problem.

So far as etiology is concerned, we know that heredity plays but a minor role. Trauma is also an insignificant factor. Chronic inflammation, long standing irritation, and malignant changes in a benign neoplasm are occasionally seen as underlying etiological factors, but in the general scope of the subject fail to explain the great majority of malignant growths. The explanation that cancer begins as an explosive, wild, uncontrollable growth in a single cell and spreads to involve other cells with the formation of a visible, palpable tumor which metastasizes and causes death, also leaves unknown just why, when, and how such a process can take place.

With reference to carcinoma of the breast, if we leave the question of etiology we also find much disagreement as to nomenclature and clin-

ical course. Thus we find clinical classifications based upon the extent of the disease as well as classifications based upon cellular structure though this may vary greatly in any given tumor mass. In some types of breast tumor many different terms are applied to the same pathological entity by pathologists in different clinics. Thus we find ourselves greatly confused with such terms as chronic cystic mastitis, Schimmelbusch's disease, mazoplasia, cystipherous desquamative epithelial hyperplasia, senile parenchymatous hypertrophy, etc., all probably phases of the same underlying pathological change.

So far as treatment is concerned, we are all agreed that at the present time there are only two methods of proved value, surgery and radiation. It would seem that this is so simple that little more need be said, but one might suspect that in a disease where so little is known of the etiology and pathology we might also find much disagreement as to treatment. As an example of the widespread confusion that exsts, I should like to quote informally the proceedings of a symposium on carcinoma of the breast at a meeting of the Chicago Medical Society about a year ago.

From the pathological view, McCarthy stated that it mattered little what type of malignancy was present; from the practical point of view the important thing was the size of the lesion, the smaller lesion offering the best prognosis. Jaffé stated that any palpable mass regardless of size was already an advanced malignancy, that cellular type was all important and size meant relatively little. From the surgical point of view, Bevan emphasized the importance of the proper selection of the incision and illustrated with lantern slides certain types of ideal incision. McNealy felt, however, that the incision was only of importance in closing the wound and stated that many of the incisions illustrated by Bevan were impractical in that they left behind the axillary skin which frequently bears metastases. As to the value of radiation, Oliver felt that in his experience radiation was worthless, Crile felt that radiation was of value only in recurrences, Thompson felt that in his experience radiation was of no value and actually exaggerated the growth of many carcinamata, and Jenkinson presented statistics to prove that radiation adequately given increases the five year cures by about 15%.

Such confusion with reference to the treatment of carcinoma of the breast justifies an examination of the facts in an effort to determine why such differences of opinion exist and what might be done to perhaps classify and choose our cases more intelligently for the various methods of treatment. With reference to carcinoma of the cervix uteri, the skin, the larynx, most lip and tongue cancers, the relative value of surgery and radiation is well understood. In these malignancies surgeons and radiologists are fairly well agreed upon the choice of treatment, especially in those cases of questionable operability. We cannot help but be impressed by the fact that where the radiologist has been given the opportunity to treat cancer in anything but the hopeless stages of the disease, he has been able to improve upon the number of clinical cures and without any reservation whatever we can say that where a cooperative relationship exists between the surgeon and the radiologist the results are far superior than when either one of these specialists gets the notion that the efforts of the other are worthless.

To begin with, I believe we must recognize that with all of our present methods of treatment and with whatever combination of these methods we may choose to use, the end results in the treatment of carcinoma of the breast are anything but encouraging. Whether we favor radical surgery alone or surgery combined with radiation the percentage of cures is nothing to become enthusiastic about. In a large measure this is due to the fact that an early diagnosis is unusual in most cases, largely because the patient comes to the physician relatively late. Portmann recently stated that about 80% of all patients coming to operation have axillary node involvement and Sampson-Handley states that about 70% of all patients have intrathoracic involvement when they first present themselves for treatment. Furthermore, before consideration is given any form of treatment we must appraise the results in a series of untreated cases. Portmann states that the average duration of life is 34 months where no treatment is instituted. A similar series of cases from the Radiumhemmet indicates that the average length of life in untreated cases is about three years. We fully realize, however, that the patient with carcinoma of the breast who is treated surgically with or without radiation, is much more comfortable, suffers less pain, lives longer, and is greatly encouraged in the thought that everything possible is being done to effect a cure.

The surgical treatment of carcinoma of the breast has been well standardized, and today the technic for radical amputation is subject only to minor and individual modifications. The sur-

vival rate is certainly not changed very materially by any particular modification. It has been estimated that there is about a 15% improvement in clinical cures since the introduction of the radical amputation. Observation of a small series of cases of the same type and extent in which simple mastectomy was done instead of the radical dissection has brought out the rather interesting fact that the survival rate is about the same as in the series where a radical amputation was performed. The cosmetic result, swelling of the arm, pain, etc., are, on the other hand, much less marked following simple mastectomy. It would be interesting if more statistics could be accumulated with reference to the relative merits of the two operations in cases of the same type histologically and of the same extent clinically. The statistics gathered from several sources indicate that about 70% of the so-called early cases where there are no demonstrable metastases survive five years; of those in which there are palpable axillary glands only about 15% survive five years. Lane-Claypons' world statistics showed that of the cases coming for treatment a clinical classification could be made which showed that only 31.7% had no skin or axillary metastases, 51% had axillary involvement, and 17.3% presented an adherent tumor with skin and axillary metastases. Of the first group only 50.4% survived three years or more, of the second group 20.5% survived three years or more, and of the last group 9.7% were alive for more than three years. After a ten-year period nearly all were dead of carcinoma.

With these statistics at his disposal the surgeon rightfully undertakes to treat all cases without demonstrable metastases. Usually, he also accepts those cases in which only axillary metastases which are not fixed complicate the primary growth. He should and usually does refer the far advanced cases with distant metastases, large ulcerating masses and inflammatory carcinomata to the radiologist for palliation, realizing that surgery has nothing to offer in these types of cancer. Finally, Dean Lewis concludes that while the results from any method of treatment may seem encouraging for a time, nearly all the cases die of cancer ultimately.

Generally speaking, therefore, the indications for surgery in carcinoma of the breast should be well established and accepted, but when we try to establish the indications for radiation we are again enmeshed in a net of complicating, confusing and contradictory statistics, and we are confronted with reports from enthusiastic radiologists who, based upon a series of a few cases, would lead us to believe that the results obtained with radiation in carcinoma of the breast are so good as to be superior to those obtained with surgery and that within a short time radiation will supplant surgery in the treatment of breast carcinoma. On the other hand, statistics from the surgical centers based upon unclassified cases or cases so far advanced that no effect was noted after irradiation are frequently published and show that radiation is useless or even "aggravates the growth." An analysis of the facts, however, shows that radiation does not supplant surgery in the treatment of operable cases nor is there any worth-while evidence to prove that radiation is useless or harmful.

It is bold to suggest that radiation should be the sole therapeutic agent in an early operable carcinoma of the breast. Certainly with the statistics and data at hand, I as a radiologist would not be inclined to such a view. Yet Douglas Quick reports a small series of cases where for one reason or another surgery was refused and radiation alone was used. He reports one case alive and well after fourteen years, and a few cases well after six and seven years. British radiologists especially have contributed favorable reports. Keynes, Souttar, and others limiting themselves almost exclusively to the use of radium have emphasized the value of radiation alone in breast cancer. While radiation may be justifiable as the sole therapeutic agent in an early case under certain unusual circumstances, I believe that with our present knowledge of the subject the field for radiation is almost exclusively as an adjunct to the surgical treatment and as a palliative measure in the inoperable cases.

A wide difference of opinion exists as to the value of pre- and postoperative radiation. Most radiologists favor it because of the results obtained in the general run of cases. Many surgeons think little of it because in their own selection of cases for radiation the results have not been startling. For the proper evaluation of radiation it is obviously necessary to group the cases treated. If a surgeon will refer only the far advanced cases upon which he has attempted some type of surgery, he surely cannot expect much from radiation. Often the surgeon faced

with an advanced case of breast carcinoma attempts surgery and refers the case to the radiologist for further treatment, with the assurance to the patient or the relatives that the x-ray treatments will destroy all of the stray cells. Such cases always end in disaster. Furthermore, to determine the proper value of radiation, it is necessary to know the difference in the clinical course of carcinoma of the breast in a young woman as compared with a similar neoplasm in a woman of seventy. Whereas the former usually runs a rapid, fatal course, a similar growth in a patient past seventy is frequently so slow growing that the patient may live beyond her normal life expectancy without any treatment. One must also appreciate that a rapidly growing immature cell carcinoma has an entirely different course clinically than a slow growing scirrhous carcinoma. And finally, it is highly important that in any attempted evaluation of results the radiation delivered be adequate and properly administered. We have repeatedly seen cases greatly under-treated in terms of total dosage and in our experience it has been the rule to find that the patient has received a poor and improper distribution of the inadequate dose of radiation.

Generally speaking, the effect of properly administered pre-operative radiation is the production of regressive changes in the tumor, and the production of obliterative changes in the vascular and lymphatic trees which tend to diminish or prevent the spread of tumor emboli at the time of the operation. The objection to this type of radiation is that it delays the radical removal of the cancer bearing area for some period of time. With these facts in mind, it seems to me that in view of the excellent surgical results in an early case without demonstrable regional metastases it is not advisable to institute pre-operative radiation and wait for the effect before undertaking radical surgery. On the other hand, if there are axillary or other metastases the surgeon should consider the possible benefits of pre-operative radiation in view of the known poor surgical results in this type of case. Again, if the cellular structure of the tumor is known to be a rapidly growing, radio-sensitive type, intensive pre-operative radiation may prove very valuable. On the other hand, little good can be expected from waiting for the effects of pre-operative radiation if the patient has an early resistant scirrhous carcinoma.

Postoperative irradiation is used as an adjunct to radical surgery for the purpose of destroying tumor cells which may have been left behind in the skin and regional lymphatics. Obviously, in early cases where the tumor is well localized and there have been no regional metastases and where radical surgery has been performed, the clinical cures will not be materially increased in number by postoperative irradiation, but in those cases in which there are regional metastases there is a very material increase in three year cures if irradiation is instituted in addition to surgery. Combined statistics in this latter group of cases shows at least a 15% increase in three year cures. With reference to the cellular type of tumor, the relative value of postoperative radiation will again be dependent upon the radiosensitivity of the cell. Thus postoperative irradiation in immature cell tumors will definitely and very materially limit and prevent recurrences and increase the number of three year cures. In the slow growing, resistant, scirrhous carcinoma postoperative irradiation will affect the end-results relatively little.

If we recall that almost 70% of the cases when first seen have metastases and that in these cases surgery can save only about 15% for a period of from three to five years, I believe it is good judgment to institute intensive postoperative radiation in all cases. Where this plan has been adopted there has been about a 15% increase in the three year cures. Frankly, the remaining 85% will run their course apparently unaffected by the radiation given, but where a large number of patients are treated the difference in the end results makes the effort considerably worth while.

In the matter of recurrent breast carcinomata, far advanced fixed tumors, ulcerated carcinomas, etc., the surgeon and radiologist are well agreed that irradiation offers the best chance for palliation. Oftentimes the effects of properly administered irradiation are startling and very encouraging but in the majority of cases the best that can be hoped for is to keep the patient comfortable and hopeful.

For the large massive tumors we are using 200,000 volt x-ray therapy, sometimes in combination with interstitial radium radiation. For the discrete, recurrent nodules interstitial radium in the form of needles or seeds has proved very valuable in our hands.

A point of great importance before attempting any type of treatment is to determine the presence of distant metastases. We recall one patient who was receiving a course of intensive high voltage x-ray treatments directly over the involved breast with good results locally, but x-ray examination of the pelvis and spine showed the presence of destructive metastases to the sacrum and some of the vertebral bodies. Another patient was being treated with a radium bomb for the purpose of destroying a recurrent nodule in the rib. X-ray examination of the chest showed the presence of large nodular metastases in the mediastinum. Cases such as this suggest that as a routine procedure whenever possible a roentgenogram of the chest, lumboscaral spine, and pelvis should be made before attempting any type of therapy for the lesion locally or for a local recurrence.

In conclusion it is fully realized that nothing new has been added to the problem. An attempt has merely been made to present the various problems in the treatment of carcinoma of the breast and to determine the proper values for the various types of treatment. The confusion that exists as to the value of irradiation in this disease is the direct result of the failure of surgeons and radiologists to properly classify their cases. Statistical data is misleading at best but in the case of carcinoma of the breast any pre-determined idea can be proved or disproved by selecting a particular class of case. Therefore, the value of any form of treatment, radiation or otherwise, can be determined only by careful selection and grouping of cases.

CONCLUSIONS

Little is known of the etiology of breast cancer and much confusion exists in the matter of histological and clinical classification.

World statistics show that early diagnosis is unusual, and that the end-results from any of our present methods of treatment are very poor so far as any permanent cure is concerned. Three year and five year cures are not uncommon if the cases are treated early enough, but within a ten year period almost all proved cases of breast carcinoma are dead.

Surgery definitely offers the best chance of clinical cure in those cases where there are no regional metastases, and in our opinion the surgical management of this disease is the method of choice even in those cases where there are demonstrable axillary metastases. We do not believe that radiation should be used as the primary therapeutic agent in either of these two types of cases except where there is some very definite constitutional contraindication for surgery.

Radiation should be used as the primary therapeutic procedure in breast carcinoma where there are extensive metastases in the skin, supraclavicular lymph glands or other local or accessible metastases.

The value of pre-operative radiation is very questionable except in very rapidly growing, immature cell type of growth. We believe postoperative radiation has some value and should be carried out in all cases, especially if physical examination or surgical dissection has revealed the presence of regional metastases.

Radium or x-radiation is of definite palliative value in the management of skin and regional recurrences.

In order to properly determine the clinical course and the value of any type of treatment it is necessary to select and study a group of cases of similar cellular type and anatomical extent in patients of about the same age and with the same constitutional make-up.

55 East Washington Street.

FREQUENCY OF SPECIFIC ALLERGIC REACTIONS

Report of Results in 300 Consecutive Cases

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EVANSTON, ILL.

The term allergy has been defined as "a condition of unusual or exaggerated specific susceptibility to a substance which is harmless in similar amounts for the majority of members of the same species."

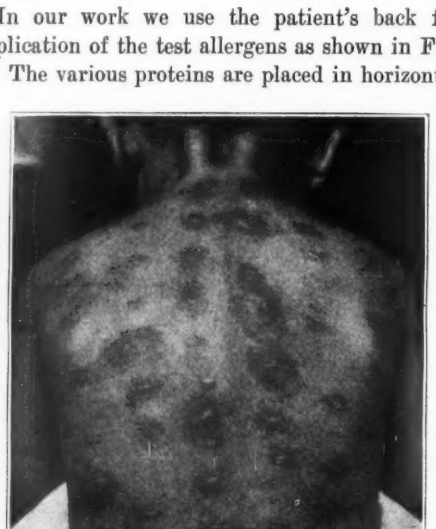
The number of conditions for which allergy is known to be wholly or in part responsible is being constantly augmented as knowledge of allergic reactions increases. The variety of protein foods, epidermics and pollens toward which a human being may display an idiosyncrasy or susceptibility is almost unlimited. In our routine tests we employ 400 individual protein preparations representative of the proteins ingested in a wide variety of foods, drugs and those elements

which might be unknowingly absorbed after inhalation.

We are often asked, "To what allergen or protein do people most often show a sensitivity?" Because of the frequency with which this question has been put to us, we determined to analyze our records in search of an answer. Three hundred case records were scrutinized and the results are tabulated in the charts below.

These patients were referred to our laboratory for allergy tests because of various possible allergic disturbances which they displayed, such as asthma, rhinitis, rheumatism, urticaria, eczema and migraine. After determining the allergic sensitivity and removing the offending allergens from the dietaries of sensitive patients, or by decreasing or eliminating the sensitivity through specific inoculations, the attending physicians report that about 80% of the cases were improved or cured.

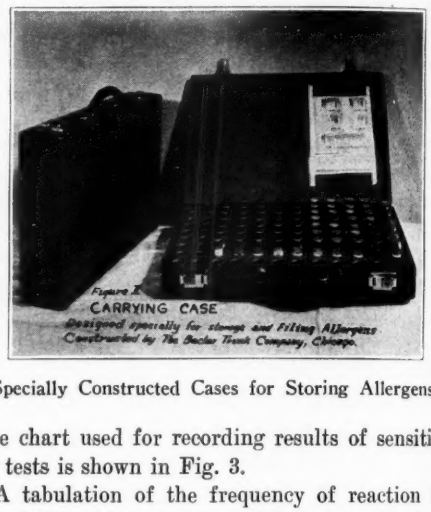
In our work we use the patient's back for application of the test allergens as shown in Fig. 1. The various proteins are placed in horizontal



Showing Various Degrees of Reaction

and vertical rows, each far enough apart to avoid overlapping of the inflammatory zones when strongly positive reactions occur. By this method it is possible to test for sensitivity to about seventy proteins at one time.

We have found group testing unsatisfactory and, therefore, apply all allergens as individual tests. Individual liquid extracts prepared by the Lederle Laboratories and individual paste forms supplied by Parke, Davis and Company have proved most satisfactory. These are kept in a specially constructed case, as shown in Fig. 2.



Specially Constructed Cases for Storing Allergens

The chart used for recording results of sensitivity tests is shown in Fig. 3.

A tabulation of the frequency of reaction to all of the 400 proteins used is not required to provide an answer to the question we set out to obtain. Therefore, the charts include only the forty proteins which showed frequency of sensitivity of more than 10% in our series. (Charts 1, 2, 3 and 4.)

The foregoing charts indicated the forty proteins which, in our series of 300 patients, displayed the greatest frequency of allergic reaction. Of these, thirty were food allergens, four were pollens, three were feathers, and three were miscellaneous proteins. In the entire series no food protein showed a constantly negative reaction; only one pollen (elm) was constantly negative; and three hair allergens (deer, hog and mule) were constantly negative. All other proteins used in testing gave positive reactions in one or more patients.

Clinical Observations. A few observations, gained from the histories of allergic patients, will serve to indicate the importance of recognizing allergy as an important factor in the care and treatment of many obscure conditions.

A woman patient was subjected to violent attacks of sneezing at certain times. The allergy tests showed that she was sensitive to fox fur. She gave her fur away and was thereafter free from her sneezing paroxysms.

A child was relieved of chronic eczema by

wearing stockings not made of silk after it was learned that she was sensitive to silk fabrics.

Another child, suffering from an almost constant fever of inexplicable origin, was put to bed and kept there for a whole year. The fever still persisted. Finally allergy tests indicated that the child had an idiosyncrasy for feathers. The feather pillow on which she always lay was removed and the fever disappeared immediately.

For over two years a boy of fifteen years had suffered from an almost continuous and violent headache. His physical examination was negative. His eyes were tested but glasses gave no relief. As a final gesture the doctor advised allergy tests. The patient was found to be sensitive to white potatoes, a favorite food. Potatoes were removed from his diet and within a week his headache had vanished. He is free from headaches as long as he remains away from white potatoes.

A most interesting story was that of a man who suffered from asthmatic attacks. He lived in New York and his firm thought so well of him that he was sent to Texas for possible relief. His asthmatic attacks immediately left him. Thereupon his employers created a new position for him in Texas and he sent for his family and belongings. Soon after this the asthma recurred as violently as ever. He then went to California alone and was again relieved. Encouraged, he sent for his family to make his home in California, but the asthma again recurred. The harrassed man next tried Arizona. The result was the same; relief was followed by recurrence of the asthma soon after his family joined him.

In the meantime this patient had been attended by many physicians. Skin tests for allergic susceptibility had been made and found negative, but he had never submitted to a *complete* series of tests. A complete series was applied to him in our laboratories. Among other reactions, he showed a strong sensitivity to cat's hair and, unfortunately, included in his belongings which came to him each time the family was moved, was a lovely Angora cat—the original cause of his asthma as well as all the recurrences.

Comments. 1. In our series, allergic reaction from foods were more frequent than from pollens and other materials.

2. An allergic person may be sensitive to chicken and chicken feathers at the same time, but only rarely to chicken and egg.

3. Mutton gave positive reactions in 52 patients in our series, while lamb reacted in only 30 patients.

4. Fowl, usually considered less harmful than meats as far as allergy is concerned, reacted positively in more instances than any of the meats. Chicken and turkey were the worst offenders.

5. Rice and orris root, which form the basis for many face powders, gave positive reactions in 54 and 40 cases respectively. One of our case histories is that of a male patient who entered his wife's dressing room as she was powdering her face and promptly developed an acute attack of asthma.

6. House dust reacted positive in 52 patients. Because of the frequency of this reaction we often have our patients bring in dust from their vacuum cleaners, extract some of it, and do patch tests, using the specific dust found in the patients' homes.

7. Ragweed was the most common offender of the pollen group.

8. Although the citrus fruits have of late been much condemned as allergy producers, the tomato was found guilty in 68 cases as compared with grapefruit, lemon and orange in 40, 41 and 47 instances respectively.

9. Mushrooms, a substance without food value, gave allergic reactions in 83 cases.

10. Tuna fish, a much used food, led the entire series with an incidence of 125 positive reactions. Anchovies ran second with a score of 92 and salmon was not far down the list with 80 positive reactions.

11. A tip to mothers who insist upon spinach for their children: 60 positive reactions to spinach were found in our series, and most of these occurred in children.

12. Positive reactions to feathers were particularly frequent in patients with asthma.

13. Silk gave the greatest number of reactions in the fabric group.

14. Occasionally it is noted that a person may be sensitive to a number of proteins but suffers no ill effects unless many of them are given an opportunity to act at the same time. Individually they exert no bad effect but collectively they do. This is illustrated in the case of one of our subjects, a young lady, who was sensitive to horse hair, cat hair, milk and pork. She rode frequently, ate pork when she chose,

and drank milk often without ill effects. But on a certain day she rode horseback, stopped en route for a ham sandwich and a glass of milk, and upon her return to the stables stopped to pet a cat. The result of this combination of events was a violent attack of urticaria and angioneurotic edema.

15. An analysis of the unrecorded reactions, those not listed among the first forty in frequency, lead to the following observations:

a. Bacteria did not react frequently, but the four patients who were sensitive to the gonococcus gave a history of having had gonorrhea, and patients with rheumatism were usually sensitive to the streptococcus.

b. Apples produced positive reactions in 43 instances, cheese in 55 and milk in only 20 instances.

c. Eggs, so frequently suspected of causing allergic reactions, were guilty only 24 times in our series.

d. Chocolate sensitivity occurred 17 times, cocoa sensitivity 24 times. Reactions to these two substances seldom occur together in the same individual.

While this series of 300 cases is too small to justify very definite conclusions, an analysis of the finding suggests that certain preconceived notions in regard to the frequency of allergic manifestations of certain proteins may require modification in the light of tabulated results.

636 Church Street.

CHART 1. FOODS SHOWING GREATEST FREQUENCY OF REACTION

Serial No.	Food Protein	Total Number of Positive Reactions	Percentage of Positive Reactions
1.	Tuna Fish	125	41.6
2.	Anchovies	92	30.6
3.	Carp	92	30.6
4.	Mushrooms	83	27.6
5.	Salmon	80	26.6
6.	Asparagus	69	23.0
7.	Tomato	68	22.6
8.	Spinach	60	20.0
9.	Red Pepper	59	19.6
10.	Chicken	57	19.0
11.	Crab	57	19.0
12.	Corn Meal	56	18.6
13.	Cheese	55	18.3
14.	Rice	54	18.0
15.	Navy Beans	53	17.6
16.	Peas	53	17.6
17.	Mutton	52	17.3
18.	Paprika	52	17.3
19.	Cauliflower	51	17.0
20.	Cabbage	50	16.6
21.	Orange	47	15.6
22.	Sweet Corn	46	15.3
23.	Beets	45	15.0
24.	Cucumber	44	14.6
25.	Apple	43	14.3
26.	Parsley	43	14.3
27.	Turkey	42	14.0
28.	Lemon	41	13.6
29.	White Potato	41	13.6
30.	Grapefruit	41	13.6

CHART 2. POLLENS SHOWING GREATEST FREQUENCY OF REACTION

Serial No.	Pollen Protein	Total Number of Positive Reactions	Percentage of Positive Reactions
31.	Giant Ragweed	57	19.0
32.	Common Ragweed	56	18.6
33.	Sunflower	42	14.0
34.	Southwestern Ragweed	40	13.3

CHART 3. EPIDERMALS SHOWING GREATEST FREQUENCY OF REACTION

Serial No.	Epidermal Protein	Total Number of Positive Reactions	Percentage of Positive Reactions
35.	Chicken Feathers	50	16.6
36.	Goose Feathers	42	14.0
37.	Duck Feathers	38	12.6

CHART 4. MISCELLANEOUS PROTEINS SHOWING GREATEST FREQUENCY OF REACTION

Serial No.	Miscellaneous Proteins	Total Number of Positive Reactions	Percentage of Positive Reactions
38.	Silk	31	10.3
39.	Housedust	52	17.3
40.	Orris Root	40	13.3

EVIPAL-SODIUM ANESTHESIA

H. J. Dooley, M. D., F. A. C. S.

OAK PARK, ILL.

For years urologists have sought the ideal anesthetic for their investigative work. The pain and agony associated in the minds of the public with cystoscopy and other genitourinary procedures have kept many patients from having some necessary analysis until perhaps too late to be of benefit. Morphine, cocaine locally, nitrous oxide, ether and the various spinal anesthesias have been used with their consequent trouble, expense and dangers as well as postanesthetic restlessness, nausea, vomiting, and headache.

A new substance for intravenous use has recently been introduced which in my opinion has a big field of usefulness in all minor procedures requiring narcosis from ten to twenty-five minutes. Though my personal experience has been confined to cystoscopic and other urological procedures, I believe it could be used for all

minor operations such as fractures and dislocations, biopsy, removal of cysts of skin and breasts, currettage, extraction of teeth, suture of traumatic lacerations, gynecological and other examinations causing pain and requiring relaxation, and in all conditions in which a short anesthetic only is desired.

This drug is called evipal-sodium, a barbiturate and chemically designed as N-methyl,-cyclohexen-methyl-barbituric acid. It is a white crystalline powder readily soluble in water and should be freshly prepared shortly before use as it disintegrates soon after being exposed to the air. The usual adult dose is 0.5 gm. to 1. gm. administered in a 10% solution, an ampule of 10 c.c. of distilled water being supplied with each dose and in which the powder is dissolved. Its therapeutic or toxic index is spoken of as 4, that is, four times the average dose has been found fatal to lower animals. Although evipal is to be considered a non-controllable anesthetic because of its non-volatile character it is detoxicated so quickly that it approaches very closely to the controllable type of anesthetic agents. It is more rapidly diffused than ether. Its rapid detoxification is due to its chemical disintegration in the organism and more particularly in the liver. In the rabbit one-half of the injected maximal narcotic dose is disintegrated in thirteen minutes. Only traces of the drug are eliminated in the urine. There is practically no change in color, respiration, pulse or blood pressure. Usually a rise of ten to fifteen heart beats and a slight fall of blood pressure are the only changes occurring in the cardiovascular system.

Preoperative medication is not necessary and has never been used in our series although morphine or scopolamine may be given when less of the evipal is required. It is suggested that no other barbiturates be administered preliminary to the injection, however.

All preparations for the operation are completed before the anesthetic is started so that there will be no delay after narcosis is complete. The solution is prepared fresh as above described and introduced slowly into one of the veins in either arm and the patient is instructed to count. Usually at the number 20 or after 3 or 4 c.c. are injected the patient becomes drowsy and after waiting 30 seconds about 2 additional c.c. are administered making about 6 c.c. in all. The needle may be left in the vein under the care of an assistant who also watches the jaw and if longer anesthesia is desired the remainder may be introduced one c.c. at a time over a period of four to six minutes.

While the narcosis is complete a few muscular movements may occur but never sufficient to interfere with the operation. After a period of fifteen or twenty minutes the patient awakens or may be easily aroused with a feeling of euphoria, absence of nausea, vomiting or headache and generally forgetful of all that has taken place.

At St. Anne's Hospital in the urological service we have used evipal in 80 cases and while this is a short series and this report is a preliminary one, the results have been so gratifying that I am sure subsequent experience will be just as satisfactory. We have had no untoward effects and have heard of nor seen records of any fatalities. In experimental animals where lethal doses were administered it was found that death was due to respiratory failure so that we have kept coramine, digifoline, and adrenalin convenient just in case a stimulant should be indicated.

Over half of this series were ambulatory patients who after a rest of one-half to two hours left the hospital without any apparent by-effects from the drug. Several were men past seventy years and one patient was given the anesthesia three times in two weeks.

It is recommended by the manufacturer that it must be used with caution in the very old, in cachetic and debilitated individuals or those suffering from advanced cardiac, vascular or renal disease.

715 Lake Street.

ANALGESIA AND ANESTHESIA IN LABOR

EUGENE CARY, M. D.
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The subject of "Analgesia and Anesthesia During Labor" can only be sketchilly covered in the brief time at our disposal. The author, therefore, will endeavor to present merely the general trend of thought on this work and conclude briefly with his personal views on the subject.

Charles E. Hunt, in the June, 1935, issue of

Presented before Chicago Medical Society, November 20, 1935.

Northwestern Medicine, gives the results of a questionnaire, sent to 80 representative obstetricians in every state of the Union. He received 78 replies. Of these, 87% were using barbiturates in various combinations.

The concensus of opinion seems to be that pentobarbital sodium or nembutal gives, universally the best results alone or, if restlessness is encountered, in combination with scopolamine or rectal ether, after the method of Irving and his co-workers of the Boston Lying-In Hospital. Irving, in *Surgery, Gynecology and Obstetrics* for January, 1934, published a report of 860 cases in which he used eight different methods of analgesia. He concluded that nembutal with scopolamine was the most effective method and it is now become the standard used at the Boston Lying-In Hospital.

Lynch, of California, also states that nembutal in conjunction with scopolamine, is the only barbiturate which he now values. Randall of the Mayo Clinic and Curtis of Northwestern Medical School, favor nembutal; the latter stating that the effects are more rapid and wear off much sooner than sodium amytal. Hunt concludes that the tendency now is to discontinue the intravenous method of medication and rather administer the drug orally or rectally, preferring nembutal to sodium amytal.

Charis Gould and B. C. Hirst of Philadelphia, in the *American Journal of Obstetrics and Gynecology* for August, 1935, analyze 24 answers to an inquiry sent out by Hirst. From this data they gathered the following facts:

1. The most widely used analgesic agents are the barbiturates, nembutal being the most popular.
2. Intravenous medication is declining.
3. The excitement induced by the barbiturates is controlled by the use of rectal ether.
4. Barbiturates are frequently combined with scopolamine; occasionally with morphine and scopolamine .
5. Morphine and scopolamine seem to be the second most common type of analgesia, never closer than 4 to 6 hours before the expected time of delivery.
6. Inhalation anesthesia is almost universally used during the late second stage and at delivery.
7. Nitrous oxide and oxygen is the most common inhalation anesthesia; mixed with ether, when greater relaxation is required.

Joseph L. Bear of this city says, "that the most popular analgesics are the barbituric acid derivatives. It must be emphasized that when they are used in small doses the patients are prone to become excitable. When they are used in maximal doses, labor tends to be prolonged, usually requires operative termination and may require prolonged resuscitation of the fetus. The maternal reaction to these drugs is completely grateful, but the obstetrician who uses them must bear in mind the above disadvantages. Morphine in sufficient dosage remains the ideal anodine for the pain of the first stage of labor. The addition of scopolamine for its amnesic value is open to the same objections as those which apply to the barbiturates. Gas analgesia is a first rate method for the control of pains of the second stage of labor and may be deepened into anesthesia for the actual delivery. Sedation and relief by the rectal administration of ether avertin or the ether-oil-quinine mixture is open to the same objections which apply to the other drugs of prolonged action."

The above is a brief summary of the current methods of producing analgesia with anesthesia in obstetrics. The author, however, is opposed to any fixed routine for all patients, and to "pushing" any drug to the point where a complete loss of memory has been produced. Where this procedure has been carried out many instances have occurred of patients becoming unruly and uncooperative, of severe cervical lacerations, of an increase in operative delivery, of cyanosis of the fetus; and of a resultant atony of the uterus, resulting at times in post-partum hemmorage.

One also should consider the difference in caring for a multiparous woman in contrast to a primipara. It is not necessary to give a multipara as much sedative, for, in most instances, the labor will be much shorter and less painful.

The author's practice has been to observe his primapara patient carefully at the onset of labor and, when the uterine contractions become severe enough to cause real distress, to give 1.5 grains of nembutal by mouth. This is repeated in one hour. Progress of labor is then watched. If dilatation of the os does not occur and the patient shows signs of fatigue, 1/6 to ¼ grain of morphine and 1/150 grain of atropine sulphate are administered hypodermatically, preceded by 20 grains of sodium bromide by mouth. The administration of the morphine is given always with the assumption that the delivery will not occur within the next four hours.

Another drug often used by the author, yet lost sight of by most physicians, is chloral hydrate. If effacement is complete and the os is dilatation at least 4 cm., the administration of 7.5 grains of chloral hydrate by mouth almost invariably will terminate the labor in a relatively short time. In fact, it almost seems, at this

stage, to have a specific relaxing influence on the lower uterine segment.

When "expulsive pains" begin, or when the head reaches the floor of the pelvis, it has been his custom to administer nitrous oxide and oxygen with each contraction and continuously at the time of the birth of the head. After the head is delivered, the cord is freed, if around the neck, and pure oxygen is administered to the mother for a minute or two. It is his belief that in this manner, whatever ill effects the nitrous oxide might have had on the child are counteracted.

If forceps are necessary, nitrous oxide and oxygen are usually sufficient; if not, ether usually is added until relaxation is sufficient to complete the operation.

In closing, brief mention should be made that chloroform in carefully measured doses, given by the open method in the last of the second stage of labor, still remains an excellent method, if used by one who understands thoroughly its use and who will combine it with suggestive treatment during delivery.

CONGENITAL UMBILICAL FISTULA

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A. *Introduction.* This is a very interesting case because of the rarity of congenital fistulae in general, and because of extreme infrequency of the variety of the congentital fistula in this case in particular.

The patient in question is a girl aged 21 years, weight 185, height five feet five inches, who came to me with a history of having a slight discharge from the umbilicus since birth. The discharge has been constant, not profuse, yellowish in character. There was no pain associated with the discharge. She became more concerned of this ailment since her age and maturity invited social contacts.

In her past history there is apparently nothing significant or correlative. Her menstrual period began at twelve years of age and has been regular periodically. She has been married recently and had miscarried at three months about one year ago.

All laboratory findings were essentially negative in the urine and blood.

B. *Physical Examination.* Abdomen: Soft, round, presenting no masses on palpation and no points of tenderness. There is no evidence of any enlarged viscera and no fluid.

Umbilicus is markedly invaginated and pointing downward; displayed no pain or tenderness on manipulation and no redness. A slight yellowish discharge was noted. The discharge was not particularly increased on manipulation and did not flow steadily according to the patient's statement. The amount of discharge that was secreted in a day was not more than 6 cc.

An attempt was made to collect the fluid for detailed examination but only enough was obtained to examine the fluid for feces, bile and urine. The bile test was slightly positive while the urinary tests were unsuccessful. B Coli were absent and no other organisms were present.

The umbilicus compares fairly well with a type which falls into Group II as classified by

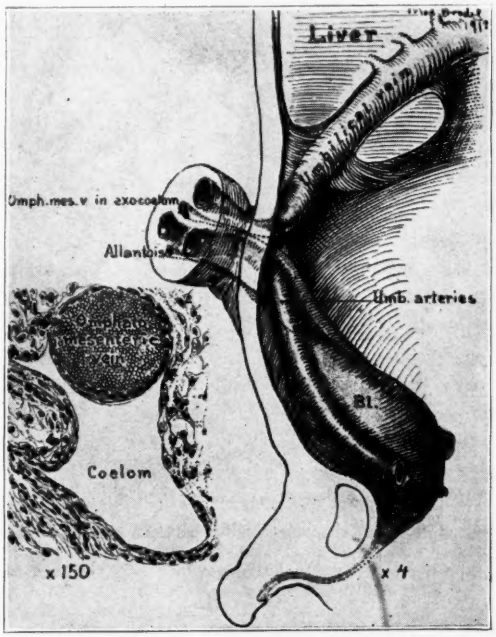

Fig. 1. Shows the sagittal view of the umbilicus, showing relations of the umbilical arteries and vein. The urachus passes out into the cord between and below the umbilical arteries. (Diagram taken from Cullen, 1916.)

Thomas Cullen of Johns Hopkins. This group is named as the "Cushion Incomplete" in which the crescent or horseshoe is below the umbilicus. According to Cullen this condition suggests the presence of a taut and short round ligament of the liver co-existing with relaxation of the abdominal wall. The variations are numerous so that while, at times, the explanation is well correlated it is not to be interpreted too dogmatically.

In the careful search through the literature on the subject it is apparently clear that very few cases are on record of congenital umbilical

fistula due to a patent umbilical vein; while a considerable number of cases have been reported of patent umbilical arteries.

C. *Anatomical — Embryological Considerations.* In any study of congenital umbilical fistula there are mainly three anatomical structures to consider:

1. The omphalomesenteric duct (Vitteline duct).
2. The umbilical arteries.
3. The umbilical vein.

1a. *At Term* the *omphalomesenteric duct* is recognized as a solid epithelial cord passing

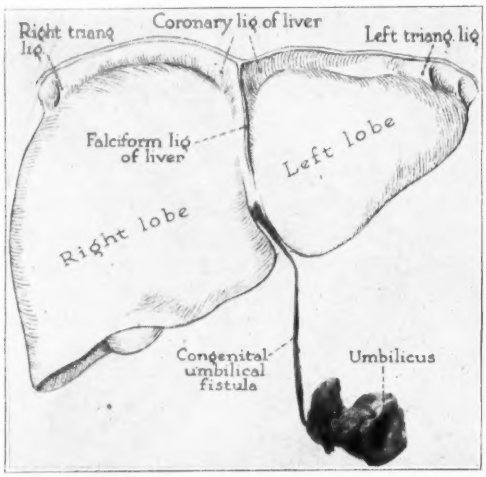

Fig. 2. Shows the relationship between the umbilical fistula and the liver. The fistulous tract is photographed from the actual tissue, which was removed at operation.

from intestine to abdominal wall, but it has no lumen.

After Birth the duct usually disappears. When the duct remains patent the fistula that is brought about is called the Meckel's diverticulum, umbilical fecal fistula or an intestinal cyst.

2a. *At Term* the *umbilical arteries* lie on either side of the urachus, pass downward on either side of the bladder and are connected with the anterior divisions of the internal iliac arteries.

After Birth the distal portions of their lumina become narrower and the vessels finally appear as the obliterated hypogastric arteries.

3a. *At Term* the umbilical vein passes directly from umbilicus to the substance of the liver. It is supported by the suspensory ligament of the liver.

Later after Birth the vein becomes impervious and in the adult the thickened outer edge of the suspensory ligament of the liver represents what remains of the umbilical vein.

D. *Operation.* In undertaking surgical procedures on congentital umbilical fistulae it is important to remember to make all skin incisions to the patient's left of the midline. After making the incision to the left of the midline I encircled the umbilicus and resected it from its cutaneous attachment and dissected it posteriorly to the peritoneum in the midline; then continuing through the left rectus incision I found the distal portion of the fistulous tract through the peritoneal reflection just where it enters the central depression in the umbilicus and proceeded to dissect the fistulous tract proximally.

The course of the fistula was as follows:

From umbilicus proximally: Skin, adipose tissue, rectus abdominus fascia (anterior layer), rectus muscle, posterior layer of rectus abdominus and transversalis fascia and then peritoneum. From the pertoneal surface of the umbilicus the tract extended upward and laterally between the peritoneum and transversalis fascia for about nine cm. and ended in the round ligament of the liver. I continued the resection for about two or three cm. into the substance of the ligament between the two lobes of the liver where the tract seemingly ended blindly into the substance of the liver. I removed the entire fistulous tract with its attachment to the umbilicus, closed the fascial compartments and closed the abdomen without drainage.

Uterus was in position and very small. The adnexa were normal.

After Care: The patient was given the average postoperative care received by abdominal cases; made a speedy recovery and was discharged from the hospital. The incision remained clean to the present time. The patient was operated on March 18, 1934.

The internes present were Drs. Movius and Vesley, and the following nurses were in attendance: Miss Hartley, Miss McAfee, Miss L. Wigg, Miss Segert and Miss Travers.

E. *Pathological Report.* Dr. R. Jaffe, No. 165.

Gross: Resected Umbilicus.

The central depression about 22mm deep and 12mm in diameter. On the inside attached to it is a cord 10 cm long and 2mm in diameter.

Microscopic: Fistula. The central depression is lined by a hornifying squamous epithelium with slender papillae. Underneath the epithelium there are perivascular round cell infiltrations. The cord attached to the inside consists of strands of dense connective tissue.

307 No. Michigan Boulevard.

MYASTHENIA GRAVIS: REPORT OF CASE

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Myasthenia gravis has been called asthenic bulbar paralysis and myasthenia pseudo-paralytica.

Myasthenia gravis presents a complex of symptoms, a set of symptoms which occur together, a syndrome which represents the sum of the signs of the morbid state. The main distinctive thing about myasthenia gravis consists of weakness of voluntary muscles. It comes on by treachery and deceipt; by sly, crafty, wily steps. The patient may experience a general feeling of uneasiness or indisposition, discomfort, or distress and heaviness in the legs as though the bodily weight were too great a load for the legs. As the disease progresses it assumes a preference for certain muscle groups. The foremost, most noticeable symptom of which the patient complains is the fact that he tires so easily upon the slightest exertion. As the disease progresses, as the loss of strength progresses, symptoms appear in certain groups of muscles, which symptoms cause the pationt to consult his physician. The muscles which are usually attacked are those of the eye, eyelids, face, lips, tongue, palate, pharynx, larynx, neck, trunk limbs and respiratory muscles. Myasthenia gravis is a progressive muscular weakness without atrophy or paralysis (except in rare cases) and upon autopsy very few, if any, morbid anatomical changes are found.

Weakness of the muscles of the tongue, pharynx, larynx and lips cause imperfect articulation, so that the patient can scarcely make himself understood (dysarthria) and great difficulty in swallowing (dysphagia), and fluids regurgitate through the nose upon attempt to swallow them. The difficulty in articulation (dysartria) may come on early in this disease and cause the patient to falter and stammer in trying to speak, and the effort to speak so tires the muscles as to make him emotional and matters become more aggravated, and he has a nasal tone of speech.

The muscles of the eyelids and of the eyes become so affected that he has drooping of the eyelid (ptosis), and he sees a single object as though it were double (diplopia); there may be a deviation of one eye from its proper direction, so that the visual axis cannot both be directed at the same time at the same objective point (strabismus), paralysis of the external ocular muscles (opthalmoplegia externa); there may be an involuntary, rapid, dancing movement of the eyeball (nystagmus). Diplopia or double vision may come on quite a while before the appearance of other definite symptoms.

The diplopia and ptosis make reading very difficult or impossible, and this interference with sight cannot be corrected by the use of glasses. The weakness of the muscles of the larynx, pharynx, tongue, palate and lips make it impossible for the patient to articulate in a manner to be undestood; his speech seems to be very laborious and thus embarrassing. The muscles of mastication and deglutition become so inactive as to make it difficult or impossible for the patient to chew or swallow, and in attempting to swallow fluids they regurgitate through the nose; the patient is unable to spit, and accumulation of secretions from the mouth and throat almost or quite suffocate him. He cannot pucker his lips to whistle. The muscles of the lips and mouth become so weak that the patient's mouth remains open, with drooping at the corners. The muscles of the neck may be so weak that the patient cannot hold up his head, except with his hands. The muscles of the limbs and body may be so weak that he cannot use them. The weakness of the respiratory muscles causes difficult breathing (dyspnea). The patient is easily tired by what would normally be an insignificant effort.

Myasthenia gravis is found in young subjects sometimes, but it mostly occurs in adults, and the incidence is about the same in the sexes.

No germ or toxin has been discovered as the cause. Some think it is largely the result of an inherited predisposition. Others believe it is caused by some wrong in the endocrine glands, which may be a family characteristic or which may result from over-exertion, or that it may follow some acute infection or worry over financial or other perplexities, or by a thymus gland that persists into adult life. My guess is that a combination of inherited predisposition (which may be an endocrine imbalance), combined with ex-

cessive fatigue, such as grief, financial reverses, infection, etc., are concerned in the cause of most cases. It is a progressive disease, and slight symptoms may exist long before the patient finds it necessary to make complaint, when rather suddenly he finds some well developed symptom (diplopia, ptosis, stiffness of tongue, inability to whistle, spit, etc. (annoys him. Myasthenia gravis is perhaps the only critical disease in which there is no pain, and the only one in which from exertion the muscles are rendered inactive, but activity returns upon resting. Dr. Jolly discovered that under the faradic current the muscles became rapidly exhausted, but muscular activity returned after a period of rest. Dr. Jolly further found that, though the muscles were exhausted into inactivity by application of the faradic current, they at the same time had response to the galvanic current.

It is said that some disturbance of a metabolic character has been found—too much creatine (which may be derived from the juice of muscle tissue) in the urine. Again, there may be too little creatine in the urine and the blood. Then calcium, which is normally found in nearly all of the organized tissues of the body, may be impoverished. Again, there may be an abnormal amount of sugar in the blood. And it is the opinion of this writer that a vitamin deficiency (especially vitamin E) may play an important role in the causation of myasthena gravis. There seems to be very little, if any, disturbance of the reflexes, except they may be weaker than normally.

As to treatment, as in so many other serious diseases, rest of body and mind are to be enjoined. The patient should not make bodily exertion, and in grave cases he should not hold any conversation. He should have a nourishing liquid or soft or tender diet, with feedings at two or three hour intervals. He should receive his food slowly to prevent choking or regurgitation through the nose. He should be kept in a temperature of 70 deg. He should be kept as nearly as pssible at complete rest, and must not be massaged. If the patient is an adult, and if the thymus still exists, x-ray may be employed. As to medicines in the treatment of myasthenia gravis it has been found that glycocoll (sometimes called "glycine," and glycocoll must not be confounded with the photographic developes, which is a poison) in level teaspoonful doses three times a day is beneficial. J. S. Summers, M. D., of Jefferson City, Missouri, in a paper which he has prepared for publication in the *Journal of the Southern Medical Association*, says:

"Creatine in the form of phospho-creatine in the muscles seems to be the activating substance that energises the muscles. If creatine is given by mouth most of it is excreted by the kidneys and passes out into the urine as such, and feeding it does not increase the creatine content of the muscles, and consequently there is no clinical improvement. Glycocoll, one of the simpler amino-acids, a sweet glue or gelatine sugar derived from muscles and other proteins, is more of a food than a drug. It is a tissue builder. It seems to supply the deficiency in muscle metabolism. This creatine is retained in the muscle as phospho-creatine and serves over and over again to supply energy for muscle contraction and muscular efficiency which increases at a remarkable rate. The glycocoll plays a definite part in muscle metabolism. It does something to alter the metabolism of creatine. Feed it to the patient and he improves; cease feeding it and he ceases to improve, and may revert. Creatine diffuses out of the muscle only after the muscle is fatigued. Then the creatine phosphate is broken down into creatine phosphoric acid, so that the creatine can diffuse out."

So much for the theory of glycocoll benefits.

As to the pathological findings, Dr. Summers says:

"There is a marked round cell infiltration of the muscles. Buzzard, in 1905, called these areas 'lymphorragias.' They are found throughout the skeletal muscles and in other organs. Both the central and peripheral nerves are normal by the most skillful microscopic observation. In other words, there is very little pathology in either the nerve or muscle tissue."

REPORT OF CASE

Dr. J. O. H., aged 57, comes of a family the men of which are, as a rule, overweight, plethoric, full-blooded, red faced, with vascular turgescence. The patient's father was a physician, and died at the age of 75, after several years of disease of the heart, probably arteriosclerosis, and for five or six years prior to death was afflicted with dementia—probably dementia paranoides. Patient's mother is living; at the age of 80 she enjoys good health and activity. Patient has five sisters living, aged respectively, 60, 58, 47, 43, all in good health, but obese and plethoric. He has a brother living and in good health at 55 years. He had two sisters die in infancy, and one brother died at age of 38 from accidental shooting. The patient has two sons, one a dentist, aged 34, who is hard of hearing; his ear trouble is said to have developed from affected tonsils. The other son is 17, and is an endocrinopath—probably an involvement of the pituitary, thymus and thyroid. Until he had endocrine treatment he was very much overweight, and his mind now is only that of a child much younger.

Until this attack of myasthenia gravis the patient has always enjoyed good health. He formerly weighed 235 pounds, now he weighs 167; however this reduction in weight is, perhaps, largely due to his inability to chew, and the difficulty of swallowing. For twenty years or more he conducted a drugstore, but six years ago he resumed the practice of medicine. He always had a speech defect; when attempting to talk it appeared that it required great effort to control the vocal chords and muscles involved in speaking and at the beginning of a sentence the effort to talk seemed to distress the vocal chords and he would make a gurgling sound in the throat, a very peculiar stammering which is difficult to describe—somewhat like the noise which a rain-crow makes.

Three years ago the patient's vision became unusually affected, and soon he noticed when using his eyes rather intently they were easily fatigued, and he had diplopia, and a little later ptosis of the left lid. Eighteen months ago he consulted an oculist, who was unable to benefit the patient with glasses and advised him to have a thorough examination. The patient had x-ray examination, urinalysis, blood tests, blood chemistry, spinal puncture, metabolism test, Wassermann, Kahn. All found nothing from which to diagnose. His blood pressure two years ago was 180/100. Eighteen months ago he had his teeth out. For quite a time he had halitosis, a cadaveric bad-breath which was almost unbearable to those in the room with him, as well as to the patient himself. The tongue was heavily coated with a dirty, yellowish coating, and the tongue appeared swollen.

He has for thirty years been an inveterate smoker, the stronger the pipe the better, and smoked from morning to late at night.

The first distinctive symptom to call this patient's attention was diplopia, and soon ptosis of the left lid; dropped-jaw soon appeared making it difficult to chew. Then it became difficult to swallow and impossible to spit, so that the secretions of the mouth and throat almost suffocated him; then followed slow, drawling, careful, though somewhat indistinct speech. He had a feeling of heavy weights upon his legs as though his body were too heavy a load for his legs to carry. After walking a short distance, or upon slight exertion in the performance of his daily rounds he felt the need of rest. On account of weakness of the muscles of the neck and head he held his head in an abnormal, asymmetrical position, and on account of the ptosis and dropped-jaw he puts his chin forward in attempting to look at any one. With all these symptoms there has been no appreciable paralysis, but a muscular weakness, especially after exertion; but the function of the muscles returns after a short rest. A year ago he seemed to lose the use of his tongue, in so much that he could not whistle or spit, had great trouble to swallow and he could not articulate, and it was impossible to understand what he attempted to say. Liquids and food would regurgitate through his nose, which made it necessary to be very careful about his feedings to prevent choking. The symptoms have been progressive from the beginning of the ptosis, diplopia and dropped-jaw. At the present he weighs 167 pounds and, perhaps, the loss of weight has been largely because of his inability to chew or swallow. He is very easily fatigued. When he holds his hands at arms' length and opens and closes the fingers as rapidly as possible, he finds at the end of 30 seconds that the muscles of the hand are so exhausted that he cannot use them, try as he will, and that he is fatigued all over, and he pants for breath, but after a period of rest the activity of the muscles has become reestablished.

Six months ago the patient began taking glycocoll in teaspoonful doses three times a day, and has taken fourteen pounds with little, if any, perceptible benefit. Two weeks ago he began taking 1 cc. of prostigmin (subcutaneously) in connection with the glycocoll, but the improvement still seemed very transitory. Within twenty minutes after administration of a dose of prostigmin he can articulate and swallow, and the effects last from three to six hours. A dose of prostigmin thirty minutes before eating is very helpful because of the power it gives to the muscles of the tongue and of mastication. I might say that for some weeks he has been taking ephedrine 3/8 grain, twice or three times daily. Ten days ago he began taking, in conjunction with the other remedies, twenty drops of embry-ol in milk once a day, and he has gained five pounds within the ten days. Embry-ol is the cold-pressed oil of wheat hearts, and is rich in vitamin E. The treatment in this case now is as follows: 1 cc. prostigmin thirty minutes before meals, three times a day; thirty minutes after meals a level teaspoonful of glycocoll in water, and fifteen minutes after giving the glycocoll give 3/8 grain ephedrine. Thirty minutes after breakfast give twenty drops of embry-ol in milk.

307 North Commercial Street.

BLOOD PRESSURE VARIABILITY

EMIL T. HOVERSON, M. A., M. D.

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The determination of the blood pressure is probably one of the most commonly used procedures in medicine. Because of its general use we are all familiar with its significance in arriving at certain conclusions regarding a patient. The current literature is replete with references concerning the various mechanisms that are involved in the maintenance of the blood pressure. Likewise the changes that occur in disease conditions, and also those changes that follow the appropriate treatment are completely discussed. Hence in this paper there seems to be no need for mention of the mechanism or of changes in disease, for they are quite well understood by everyone.

However, in spite of the general acceptance

From the Chicago State Hospital.

of the explanations and mechanisms, there still remains much that is not clearly understood about blood pressure. For example we all know that variations may occur in disease conditions; but practically no mention is made of the variations that may occur in the so-called normal individual. It is the purpose of this paper to show

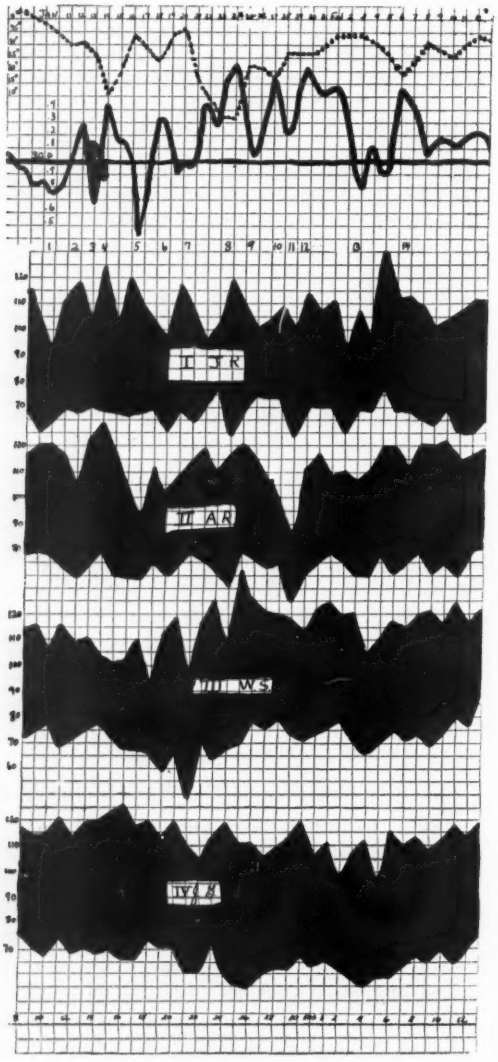

Fig. 1. Range of temperatures.

that variations, sometimes of great magnitude, occur in the normal healthy person. Certain conclusions will be made that are in direct opposition to the view generally held concerning the interpretation of the normal blood pressure.

As far as can be determined there are only two references[1] in the literature that deal in detail with blood pressure variations in the so-called normal person. While a number of reports deal with daily and even hourly determinations, the results are averaged, and the means taken. Obviously the final interpretation will be quite different. On account of the scarcity of the material in the literature, it is believed that a representation of the material concerning blood pressure variations in terms of daily variations will be of value in arriving at a clearer conception of the meaning of blood pressure, and its relation and application to the normal and diseased individual. The issue of blood pressure meaning seems especially to have been clouded by mass figures, especially those which tend to give a certain tension level to definite specified age groups. Because of the manner in which averages have been arrived at, the meaning in terms of the single individual has been entirely lost.

The procedure most commonly used in the measurement of the blood pressure in man is simple and is sufficiently well known as to call for no detailed description. So commonly has the determination come to be used that few indeed are the patients who do not know something about their blood pressure. In most instances they have been told its significance in terms of elevated, decreased, and occasionally normal pressure. Whatever it may be, it was no doubt arrived at in most cases, following a single or at the most several determinations. Of course it is understood that the usual procedure of determination merely gives a measure of the pressure required to obliterate the sounds of blood flowing through an artery that is constricted by a cuff applied to the arm.

For the present study, determinations were made daily on four patients, selected on the basis of their cooperation and behavior. As will be later mentioned, the selection was also made on the basis of the body type. All were hospitalized at the Chicago State Hospital, and were living on the same ward. As far as is known they were all given the same food, and were all under the same daily ward routine. In other words, their daily life was standardized as well as possible. An ordinary mercury manometer was used for the determinations. The rubber cuff was always placed on the left arm, and the readings were made with the patient in the sitting posi-

tion, and always in the same room. The patients were at ease, and never was there any demonstrable muscular tenseness. Because of these precautions, it is felt that variations were not due to different emotional states in themselves. Further support of this last statement will be given later.

The systolic reading was taken as that point on the manometer at which the sounds were first heard in a regular definite manner. The diastolic pressure was taken at that point at which the sounds were no longer audible. Since all determinations were made by the same person, it is felt that the error resulting from faulty technique is negligible.

To obviate any additional error, all readings were made at about 8:00 A. M. The period of observation extended from January 8 to February 13, inclusive. During all this time, there was no demonstrable change in the physical state of the patients under observation; there were no infectious conditions, or any other condition present that might affect the blood pressure.

A brief summary of the hospital record of each patient is as follows:

Patient 1. 43042: Admitted to the Chicago State Hospital January 25, 1934. On admission the age was given as 33 years, born on January 14. The physical examination showed no gross pathologic findings. The blood Wassermann reaction and the urine tests were within the normal limits. The mental symptoms that were presented by the patient warranted the classification of dementia praecox, catatonic type. On admission the patient was restless and hyperactive, but since October 15, 1934, she has been quiet. During the period of this study the patient presented a silly superficial attitude with marked emotional indifference. She showed no periods of excitement, and presented the same physical and mental picture day after day.

On admission she weighed 97 pounds, and was 63 inches tall. The blood pressure was recorded as 120/60.

Patient 2. 42315: White female admitted to the Chicago State Hospital August 24, 1933. The age was recorded as 38 years, the birthday was unknown. The patient was married and had three children. The physical and laboratory examinations indicated no abnormal findings. The mental reactions were those of dementia praecox, hebephrenic type. During her entire stay at the hospital the patient has presented a picture of indifference. She does no work, and sits about the ward all day, unresponsive to efforts to arouse her interest. In spite of this attitude, she has always been friendly.

On admission she weighed 118 pounds, and was 55 inches tall. The blood pressure on admission was 124/76.

Patient 3. 39127: White female admitted to the Chicago State Hospital July 2, 1931. Birthday was unknown, but the age was given as 31 years. The patient, previous to her commitment, had periods of excitement, which were always short-lived and over in the space of a few hours at the most. She was classified as a case of mental deficiency. The physical and laboratory and neurologic examinations were indicative of no pathology in the patient. Here she has occasionally periods of excitement. During the period of study they always occurred when the blood pressure readings were at their peaks. By reference to the particular chart, it is seen that the rises were abrupt which indicated some emotional factor. However, the drops always were gradual. If emotional states were responsible for the increases in blood pressure, then the drops should also be quite abrupt. It is believed that the changes in behavior were conditioned by the independent rise in systolic blood pressure, and that the rise in blood pressure preceded the emotional upset.

On admission the weight was 164 pounds, and the height was 65 inches. The blood pressure was recorded as 110/70. There were no findings that indicated anything abnormal in the physical state.

Patient 4. 44104: White female admitted here October 2, 1934. Born on November 26, 1916. The physical, laboratory and neurologic findings here showed nothing abnormal. The mental findings supported the classification of dementia praecox of the hebephrenic type. Here the patient has maintained the same stereotyped behavior, characterized by a lazy indifference to all stimuli. She has had no restless or excited periods.

On admission her weight was 160 pounds, and the height was 61 inches. The blood pressure was recorded as 128/92.

On the basis of other work now in progress the evidence points to the fact that the tall, lean (leptosome) type of person shows the greater variations in blood pressure, both from the number of changes, and the severity of the variations. On the other hand, the short, obese (pyknotic) person is relatively stable when compared with the leptosome. An indication of the body type of the four individuals here considered is afforded by the weight/height ratio. Thus this ratio will be less for the leptosome, and greater for the pyknotic type. The ratios obtained from the weight/height figures are as follows:

Patient 1— 97/63 or 1.54
Patient 2—118/55 or 2.14
Patient 3—164/65 or 2.51
Patient 4—160/61 or 2.61

Thus patient 1 falls into the leptosome group, while patient 4 falls into the pyknotic group, with patients 2 and 3 placed appropriately.

Reference to the charts show that it is the leptosome or patients 1 and 2 that show the greater number of changes, while patients 3 and 4 show

fewer changes, and the changes in themselves are less abrupt. On the basis of many other similar studies, this relationship has been found to be quite constant.

A critical analysis of the variations in the blood pressures here recorded shows that there is operative some common factor, for in general all patients show similar periods of increased or decreased pressures. In some instances the changes are quite abrupt, while in others they are accumulative. Patient 1 shows the first, while patient 3 shows the accumulative phenomena quite well. From previous studies[2] dealing with the effect of the meteorologic environment upon the organism, it was noted that there existed a close correlation between the sedimentation test, and the serologic tests on the one hand, with the meteorologic states on the other. It is in no way meant that the meteorologic environment is solely responsible for these changes, it may merely condition it to some degree. For purposes of information, the meteorogram for the period is placed over the graphs. Changes are to be expected with definite changes in the meteorologic state, such as occurs when the barometric pressure is reduced with an increase in the external temperature, or when the barometric pressure is increased, with a corresponding decrease in the external temperature. Such states are designated by numbers placed under the barograph.

Analysis shows that there exists a correlation, but it is a general one. Possibly the meteorologic state may have something to do with the conditioning of the blood pressure responses. However, it is at the most only one of the many factors. Further study is indicated in an effort to account for the individual variations.

For the purpose of information, the menstrual dates are recorded:

Patient 1—Jan. 10-13
Patient 2—Jan. 19-23
Patient 3—Jan. 10-13 and Feb. 4-7
Patient 4—Jan. 16-20

From these dates it is seen that there is no appreciable change in either the systolic, diastolic, or pulse pressure either preceding, during, or immediately after the menstrual periods. This general observation holds true in all the cases so far studied.

Comment. The charts obtained from the four patients here presented are taken as the representative of a series of other charts. In general, the leptosome type of individual reacts in such a manner as to have many variations in a given period of time, and the variations are abrupt and of some magnitude. In contrast to this, the pyknotic type of individual reacts less abruptly, and less frequently, and the variations are of lesser magnitude. As previously stated, the original patients were so selected as to rule out the emotional factor. It is known that emotional stress may raise the systolic pressure as high as fifty millimeters of mercury. However, in such instances, when the emotional stress is removed, the pressure falls rapidly, sometimes within the space of an hour. In the instances here recorded, the patients were considered emotionally deteriorated, and were not known to react to such factors, at least not apparently. Further, the increases of blood pressure were not transitory affairs, but usually persisted for several days. This is especially true of the decreases of blood pressures following an abrupt rise. In most instances, the pressure continued to drop for several days, thus ruling out the emotional factor.

From other work now in progress, it is known that the leptosome type individual is the more susceptible to the contracting of infectious diseases, whereas the pyknotic type of individual is the more stable one, who usually succumbs to metabolic conditions, such as hypertension, etc.

From the form of blood pressures, the writer can only conclude that the usual method of recording the blood pressure of say, 120/80 is almost valueless. The single reading might be taken at such a time when the patient was at his or her peak, or at a low level, or any point between. It seems that the only logical method then should be to take a series of readings, graph them, and from the composite picture draw conclusions. In the conclusions, should be considered such things as the frequency of the variations, the type of variation, and the magnitude of the changes. Obviously, a person who shows few changes, and in whom the changes are minimal is more stable than one who shows abrupt, frequent and maximal variations.

CONCLUSIONS

1. There occurs definite variations in the blood pressure which are physiologic and not pathologic in nature.

2. The type of the variations of blood pres-

sure seems to be conditioned to some degree by the body type.

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THE CORRELATION BETWEEN APPENDICITIS AND GALL-BLADDER DISEASE

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CHICAGO

Mechanically the appendix and the gall-bladder are similar in construction, in so far as they are blind pouches or tubes connected to their dependent contemporaries by a musculo-mucous membrane valve; the blood supply in each case running externally along the longitudinal axis, the smaller vessels circumventing the organ to terminate in small vessels at the ends and anastomosing within the mucous lining throughout the organ. Infections to both the appendix and gall-bladder occur at these terminals, producing primarily an endarteritis. These infectious processes can be produced any place along the axis of the organs, involve the surrounding tissues and spread either directly or secondarily by cutting off the blood supply.

Charles Gordon Heyd[1] relates four theoretical ways in which a gall-bladder may be infected. One of these presupposes a mucosal infection, the infecting organisms reaching the gall-bladder either by ascent from the duodenum, or descent from the liver. Many experiments have been done to try to induce infection directly into the gall-bladder, and it has been found that it is very difficult to infect the organ by injection of virulent bacteria into the cavity. Gall stones are not produced likewise, in this manner. Other infectious processes must be also present to lessen the resistance of the underlying tissues in order to presuppose to gall-bladder infection. Even regurgitation of duodenal infectious material has been demonstrated in the gall-bladder without infecting the organ itself. Two other means of infection of the gall-bladder are by carrying embolic suppuration material by means of the blood stream, and by direct continuity of infection with neighboring viscera. In the blood stream we particularly distinguish a hematogenous infection by means of the portal circulation. If the vascular system is responsible for the gall-bladder infections one would think naturally that the liver would be simultaneously involved. This, however, is not the case, as a preponderance of evidence has been cited in which the right lobe of the liver is the usual portion infected, and particularly that portion in intimate contact with the gall-bladder. The fourth method of infection of the gall-bladder is by means of the lymphatic stream. It has been demonstrated by Franke, Sweet, Deaver, and Pfeiffer that there is a very intimate and extensive lymphatic connection between the glall-bladder, liver, common duct and pancreas. Anatomically, according to Sappey, Sudler and Graham, there is no separation between the extra- and intrahepatic system of lymphatics, and a hepatolymphatic infection would offer a reasonable basis to account for most of the cases of cholecystitis.

It seems logical to believe that infections of the gall-bladder therefore were direct infections of the wall of that organ from an infected liver, reaching the liver by means of the portal veins, involving the periportal tissues producing a pericholangitis, traveling through the lymphatics directly by extension to the gall-bladder. This would offer an explanation for the cholecystitis that is coincident with appendicitis, peptic ulcer, typhoid fever and suppurative hemorrhoids.

Rosenow in his original studies of gastric and duodenal ulcer[2], cholecystitis[3] and appendicitis[4], injected cultured bacteria from active inflammatory organs into the blood stream of rabbits, dogs, and guinea pigs. The tonsils were used as a basic organ for bacterial culture of streptococci. In a series of 65 animals, 32 were injected with cultures from the tonsils, 6 with bacteria found in the pus from the tonsils, and 7 with the streptococci isolated from 3 incised ulcers and 23 with the cultures of infected teeth. Hemorrhage or ulcer or both (Gastric and Duodenal) was found in 80% of the cases injected. Fifteen animals showed gall-bladder infections besides the ulcers and hemorrhage. Seven showed lesions in the skeletal muscles, 5 in the joints and 1 each in kidney and urinary bladder, 9 in the heart valves.

Cultures were taken from the site of these

Presented before staff of Woodlawn Hospital, March, 1934.

ulcers and gall-bladder infections in 17 cases and strains recovered in 15. Later streptococci[5] were found in 17 cases of 27 chronic ulcers excised at operation, staphylococci in 6, colon in 5, and 5 were sterile cultures. All these cases had active

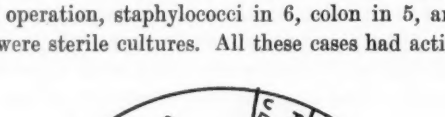

Chart 1. Showing relation between appendicitis and Cholecystitis and other types of infection.

symptoms at the time of study, 2 with a history of gastric hemorrhage previous to operations. Only 4 had had tonsillitis attacks; 2 of these had associated arthritis. In these experimental studies,

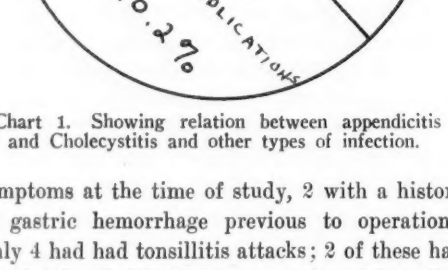

Chart 2. Showing relation between appendicitis with Cholecystitis and other complications with Cholecystitis.

of the streptococci there was a high incidence of affinity of the bacteria recovered for reinfection of the stomach and gall-bladder simultaneously; that is, 68% of gastric involvements with 21%

associated gall-bladders. This suggests that common associations of 2 or more of these conditions in man may be due to embolic infections of bacteria having affinity for the structures in volved. And, especially, does this occur in organs that

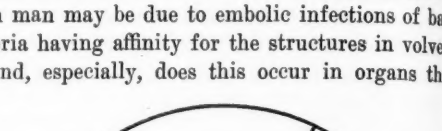

Chart 3. Showing relation between chronic appendicitis, chronic appendicitis and cholecystitis and Duodenal ulcer uncomplicated.

mechanically do not have a good natural means of healing or draining; that is appendix and gall-bladder.

Strains of streptococci removed from the ap-

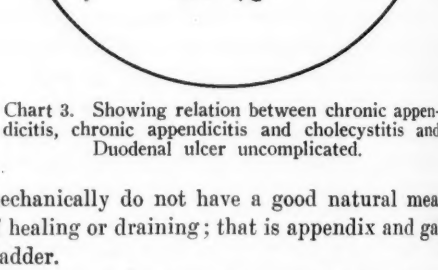

Chart 4. Showing relation between appendicitis and Cholelithiasis.

pendix in the Rosenow series and injected showed 79% animal appendices infected. The colon bacillus was also found in the gall-bladder and appendix cases, but was thought only the secondary factor in the diseases. Previous at-

tacks of appendicitis and gall-bladder diseases naturally disposes to acute attacks due to the mechanical factors such as fecal concretions, gall stones, and adhesions.

Brown,[6] Moody,[7] and Detweiler and Maitland[8] only corroborated the studies of Rosenow.

W. J. Mayo[9] in his Presidential address before the Ninth Annual Meeting of the Clinical Congress of the American College of Surgeons, states his observations, that there is a curious relationship between acute perforations of the gall-bladder and acute appendicitis. The gall-bladders usually contain stones and the appendices show evidences of former attacks. He states his belief that the most of these cases have their beginning of the acute attack in the appendix and extends through the portal circulations. The character of the pus and the organisms found bear him out in this contention, as they contain infecting organisms of the same morphological types.

A. Latham and T. Crisp English,[10] speak of the frequency of finding a chronic or subacute appendix when the abdomen has been laparotomized for other conditions, especially for diseases of the stomach, duodenum, gall-bladder and pelvic organs. It is generally agreed that if another organ is being operated upon, and there is no contraindication to an appendectomy, it is good surgery to removed the latter even thought it be normal.

M. Poenaru,[11] Caplesco et Mlle. Eugenie Grossu cite 8 cases of conjunctival jaundice associated with acute appendicitis. At operation a hepatitis was found associated with the acute appendicitis. Their observations were that this was a sign of latent as well as acute appendicitis; latent gall-bladder and a blood-borne infection from the appendix to the liver and then by extension to the gall-bladder.

Rutherford,[12] R., cites an unusual case of associated gall-bladder infection with acute appendix in so far as the patient had no ascending colon. This anomaly is accounted for by the fact that the embryonic placement of the organs allowed the cecum to be placed at the hepatic flexure of the large bowel, appendix attached normally but in close approximation to the gall-bladder. The resultant infection to the appendix extended to the neighboring gall-bladder by direct extension.

Miller[13] gives a symposium on an associated acute gall-bladder infection and acute appendix coming on the 5th day of the puerperium in which the initial lesion was traced to extraction of teeth 2 days previously.

Rivers and Hartman,[14] tabulate the associated conditions found after exploratory operations for cholecystitis and cholelithiasis showing the relationship to cases of subacute and chronic appendicitis. In a previous paper, they tabulated the results of abdominal exploration for gastric and duodenal ulcer, finding many conditions previously undiagnosed. Many of these overlooked conditions were so masked by the major symptoms that a misdiagnosis was easily attainable. The diagnosis in 287 cases of cholecystitis was made in this series, and operative interference instituted. The complications in these cases were charted diagrammatically with the resultant figures. The preoperative diagnosis being only cholecystitis, the cases with multiple diagnoses were excluded, to make the comparisons between cholecystitis and other pathology. For instance in the series of 287 cases; 31% were associated appendicitis; 26.9% subacute and chronic cholecystitis; 11% cholelithiasis and 18.9% associated hepatitis.

In the second series of 592 cases in which operations were undertaken for cholelithiasis, gallstones were present in 84.8%. In 28.9% chronic appendicitis was found; in 2.5% subacute appendicitis; in 12.7% hepatitis, and 7.8% pancreatitis. In this group, 15.2% of the cases previously diagnosed as cholelithiasis, no gallstones were found.

In a third group of 879 cases studied the preoperative diagnosis was gallstones or cholecystitis. The associated appendix pathology here was found to be 31.8%.

Statistics taken from the Woodlawn Hospital, Chicago, are given graphically in order to show the frequency of associated gall-bladder disease and appendicitis. In a group of 112 cases studied, chronic and acute cholecystitis were the preoperative diagnoses.

The pathology present as other infections included intestinal adhesions, myocarditis, pregnancy, toxic goiter, salphingitis, ovarian cyst, carcinoma, pneumonia, lues, colitis, cirrhosis of the liver, cholangitis, pancreatitis, bronchiectasis, and arthritis deformans. This gives a very representative picture of the relationship between cholecystitis and its affiliated pathology.

Next 297 cases were catalogued to show the correlationship in percentage between gall-bladder and appendix pathology.

Forty and six-tenths (40.6%) per cent. of the 297 cases studied were associated with appendicitis; they being operated upon for cholecystitis and associated pathology found at operation.

In 68 cases of duodenal ulcer 4 cases or 5.8% were associated chronic appendix alone, with 13.2% chronic cholecystitis and appendicitis.

One hundred sixty-eight cases diagnosed as cholelithiasis were found to be accompanied with 29 chronic appendices. Chart 4 shows this graphically.

In 72 cases of peptic ulcer, cholecystitis was present in 3 or about 4.25% of the cases; chronic appendicitis, alone, was found in only 2 instances or in 2.8% of the cases.

SUMMARY

1. Four theories of gall-bladder disease and appendicitis are set forth by Charles Gordon Heyd, in which the infective emboli theory well fits the clinical association of cholecystitis and appendicitis.

2. Rosenow's research of bacterial injection into the blood stream indicates an especial predilection of bacteria for the various organs affected; that is, organisms cultured from the stomach ulcer cases when reinjected produced a preponderance of ulcer cases in the animal group injected. Same is true for gall-bladder and appendix infections.

3. W. J. Mayo states his clinical observations of the marked correlation of gall-bladder and appendix infections.

4. Latham and English also note clinical evidence similar to that of Mayo, while

5. M. Poenaru and associate give another clinical sign of chronic or subacute appendicitis, that is, conjunctival jaundice, caused by a concomitant hepatitis.

6. Direct extension of infection is noted especially in cases where the appendix lay in close proximity to the gall-bladder and more especially in acute and perforative types.

7. Other foci of infection are cited by Miller in so far as acute appendicitis and acute cholecystitis occurred on the fifth day post-partum after extraction of teeth two days previously.

8. Rivers and Hartman tabulate in percentage the associated diseases found in groups of 287, 592, and 879 cases operated on.

9. Statistics taken from Woodlawn Hospital show the relationship in percentage with cholecystitis and appendicitis; also in 112 cases the association between cholecystitis and other diseases. Forty and six-tenths per cent. of 297 cases diagnosed as cholecystitis were associated with appendicitis as compared with 31% in the Mayo series. Thirty-six and six-tenths (36.6%) per cent. in the first 112 cases showed appendicitis in conjunction with cholecystitis.

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SUDDEN DEATH AND SYPHILIS

It has been reported that approximately 10 percent of patients with cardiovascular syphilis die a cardiac death.

In 33 cases of sudden death, studied post-mortem, 6 showed syphilitic aortitis with coronary orifice constriction; 4 showed syphilitic aortitis with aneurism.

Cardiac syphilis means a syphilitic aortitis, which is usually confined to the arch of the aorta.—Dr. A. L. Briskman, in *Am. J. Syph.*, Oct., 1932.

SOME EARLY MEDICAL HISTORY OF THE UPPER DESPLAINES VALLEY, ILLINOIS

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Many years ago I began collecting everything I could that had any bearing upon the early history of the locality in which I live, a limited part of the region of the upper Des Plaines Valley. It has resulted in the assemblage of many old photos and daguerrotypes, many monographs, contracts, deeds, passports, receipts, bills, and very many old letters or copies of letters dating back to 1833. A judge in the state of Washington who had lived here wrote me several hundred pages of early history. Obviously the subject matter of this paper is but an incident in the major research that has engaged my attention.

To me the collecting of early local history has been an intriguing pastime. I have unearthed interesting records from old attic trunks, from boxes in the lofts of out-houses, corn-cribs and garages. In the quest for early local history the word "failure" does not exist.

Robt. Collyer, the Unitarian preacher, published a biography of A. H. Conant who had resided two miles north of where I now live. Collyer quoted extensively from a diary that Conant had kept while living here. This diary contained almost daily entries from 1836 to 1841. The idea of getting this record possessed me. Conant moved from Des Plaines to Geneva. A visit there netted me a copy of Collyer's book but no diary. Conant enlisted as Chaplain of the 19th Illinois from Rockford, and died immediately after the battle of Stone River. At my first visit to Rockford I secured some daguerrotypes and many of Conant's war letters and sermons, but no diary. On my second visit to Rockford, I learned that when Conant's daughter went West she had left her household effects in the loft of a garage. I went through everything there, but still no diary. I returned home discouraged but undeterred.

On a third trip, I scoured the loft again but found nothing. Discouraged, I came downstairs and a boy repairing a car, pointed to a large box. Lifting an old oil painting, there was the leather bound diary in a perfect state of preservation! I turned this diary over to the Chicago Historical Society. They very kindly made me a copy. It might be interesting to you to learn that this same A. H. Conant read a paper at the first meeting of the Chicago Historical Society. I dug out three letters in a little town in Washington that confirms this statement.

I am free to say that the training of a medical man is and should be the best possible preparation for one engaged in collecting local history. A medical man's status and his position in society gives him a distinct advantage over commercial makers of county histories. It goes without saying that he who does not hesitate to inquire into the venereal history of a person would not hesitate to peer into skeleton closets of the past. I wanted information as to the life of an early school teacher who later had killed a man in Minnesota. I located his wife in Connecticut. I wrote her and asked her for her husband's photo. She said I must be mistaken in the person, and of course she couldn't do anything for me. Before I got through, I not only got his history and his photo, but also her photograph.

I once made a trip to Northern Wisconsin to interview another pioneer school teacher. I rang the door bell. A highly neurotic daughter opened the door rather gingerly. To her, I announced my mission. She said her mother was an invalid, and had recently had a stroke and couldn't see anyone. I told her that I was a physician and I would see to it that no damage would result. She at once admitted me. I spent a very pleasant hour with the old lady, showed her a lot of photographs of her childhood friends and left her and her daughter in a happy mood, *after I had gotten what I wanted.* It has happened several times that I have been able to trade a little professional advice for a lot of early history.

In every age a few are born before their time. No one knows whether these anticipations are intuitive or philosophic. These few seem to understand the inadequacy of present day conditions and are able to visualize those needs of the future that the slow process of evolution takes years to bring about. Such an one was Dr. John A. Kennicott. He was born January 5, 1802, in Montgomery county, (now Fulton county), New York, and died June 4, 1863, at The Grove, Northfield Township, Illinois. His paternal ancestors descended from Roger Kennicott who came from Devonshire in 1660, and settled in Malden, Mass. Three of his lineal descendants were named John. The fourth, named Jona-

than, was the father of Dr. Kennicott. All had large families, of from six to fifteen children. This Jonathan married Jane McMillan, descendant of a widely known Jacobite family. They moved from Massachusetts to New York at an early date and had fifteen children.

The second child is the subject of this sketch. As a child he worked on the farm and orchard. According to his own statement, he attended primary school only thirty days. About 1823, he went to Buffalo where he studied medicine, taught district school, clerked in a drug store, and some of the time taking lectures at the medical college at Fairfield, New York, where he got his medical degree in 1826.

It may be interesting to learn something of this medical college located in the wilds of central New York in a village that in 1861 had but 300 inhabitants.

Fairfield Academy must have been organized in the late eighteenth century. In 1808, Fairfield Medical College was made an adjunct to Fairfield Academy. This institution was called also the College of Physicians and Surgeons of the Western District of New York. In 1810 the Legislature granted the college $5,000, which had been the proceeds of a lottery. Feuds and jealousies among the Professors hindered the college's organization. However, at one time Fairfield stood next to the University of Pennsylvania in number of students. In 1820 an act of Legislature gave to Fairfield Medical College for dissection, the unclaimed bodies of the Auburn prison. Organization of the Geneva Medical College in 1835 and of the Albany Medical College in 1838 cut into the attendance of the Fairfield school to such an extent that with the session of 1839-40, it closed its doors. Not however until many distinguished men either had taught in or attended this school. Three of the Hadleys and Asa Gray attended Fairfield. Dr. N. S. Davis, Sr., was an alumnus.

It is altogether likely that Dr. Kennicott took up medicine mainly as a livelihood. Later in life he seems to have looked at it as a cultural study. In a letter in 1857 to his son, Charles, who was attending school in Buffalo, Dr. Kennicott writes, "It might not be amiss for you to accept the offer of your friends in Rush Medical College to attend a full course there some winter as a part of a good education for a pomologist, or rather a horticulturist. I think a course at Rush would be both pleasant and profitable. I enjoyed the study of medicine very much." Immediately after graduation Dr. Kennicott wrote for the press in Buffalo and lectured on botany. He practiced medicine on the Welland Canal. In 1828 Dr. Kennicott visited Detroit, Mich., Sandusky, Columbus, and Cincinnati, Ohio; Louisville, Ky., and Natchez, Tenn.; spending some time at each place in botanizing. He lectured and practiced medicine near Jackson, Mississippi, for a while; after which he located in New Orleans, La. In 1830 Dr. Kennicott married Mary Shutts Ransom in Buffalo. In New Orleans, he was for a time principal of a primary school. He had charge of a male orphanage for one year. He is credited with having published the first literary, scientific and religious journal in New Orleans. This was called the "Louisiana Recorder."

In 1834 or 1835 Dr. Kennicott's father and brothers took up land 18 miles Northwest of Chicago on the stage route to Wisconsin, which is now Milwaukee Ave. This is undoubtedly why in 1836 Dr. Kennicott came to Cook County. At this time there were two other doctors in this locality; Dr. Silas Meacham, a lineal descendant of Miles Standish, and Dr. Fred Miner. Dr. Miner's father, Aaron, came with him from Vermont. He was a Revolutionary soldier, who died in Elk Grove, Cook County, in 1848, and was buried there. Eli Skinner, another soldier of the Revolution, came to this Yankee settlement and was buried in the same cemetery. Of the three Revolutionary soldiers who are known to be buried in Cook county, the remains of two lie in this little country burying ground about five miles west of Des Plaines. The third, the renowned David Kennison, was buried in Lincoln Park.

Although it is more than 150 years since the close of the war of the Revolution, there is still living, at this writing, one real son of that war,—William Constant Wheeler of Marshfield, Vermont. His father enlisted in 1780 when fourteen years of age and, when 76 years old, he married for the third time, and became the father of two children. William Constant is now 87 years old and in good health.

As soon as Dr. Kennicott got his log house up he started in the active practice of medicine. His daughter told me that his rides took him

as far north as Waukegan and as far south as Elgin. Some of the time he had five horses.

It has been difficult to learn much definite data of Dr. Kennicott's treatment of diseases. I have been informed that he did not believe much in emetics nor in blood letting; though he bled a younger brother three times who had meningitis. Mercury in the form of calomel, and mercury with chalk were common remedies for nearly everything. His daughter told me he treated diphtheria by cauterizing the throat with silver nitrate stick. The medicine case of the early doctor smelled strongly of rhubarb. He did only minor emergency surgery. He usually called in either Dr. Brainard or Dr. Freer for help. I have been unable to learn that he ever attended a medical meeting; yet he kept in contact with the best medical men of Chicago; Brainard, Freer, Herrick, Blaney and others.

Dr. Kennicott had made few professional calls when he began to plant trees, shrubs and flowers, particularly fruit trees. Early in the forties he started the Kennicott nurseries, probably the first in northern Illinois. A company still operates under that name. It is conceded that no one did more for fruit culture in the west than did Dr. Kennicott. He became the horticultural editor of the "Prairie Farmer" and, for a time, its editor. He was president of the Illinois State Horticultural Society, and secretary of the State Agricultural Society. He edited the first two volumes of this organization. He was the first president of the American Pomological Society which met in 1848. He seems to have been on intimate terms with many of the leading scientists, such as Kirtland of Cleveland, Latham of Milwaukee, Thomas and the two Downings of New York, and the thundering J. B. Turner of Jacksonville. Few did more than Dr. Kennicott to secure the final establishment of the U. S. Dept. of Agriculture. It is said that Zachary Taylor promised Kennicott that he would organize a separate Department of Agriculture if elected. Taylor's untimely death prevented this. Dr. Kennicott's name was prominently mentioned, even in eastern papers, as the logical head of this cabinet position should it be organized.

Dr. Kennicott was a busy country doctor, and his editorial and agricultural society connections must have taken much of his time. What I believe to have been his greatest work, was what he did for real education in this country. Here was a great country with unlimited possibilities for agricultural and industrial development, yet about all that the colleges turned out were preachers and classical graduates. As late as 1850 Turner said that there were 269 classical schools in the U. S. and not one agricultural school worthy of the name, although the vast majority of people were farmers.

A letter written in 1838 by my father, who was attending an academy in Vermont, states that he "is studying Greek, Latin and French," and apparently not taking English. While the classics are not stressed as much as formerly, in my opinion more time in school should be given to the study of English, of modern languages and of the natural sciences. I was a member of a High School Board for twenty-two years. I recall with dismay a farmer boy who, through the advice of a classically trained principal, studied Latin four years. For four years this boy walked three miles night and morning, putting in one fourth of his time to a study that touched his daily life less than a falling star. Intrenched behind the practices and traditions of ages, coupled with the greed, envy and jealousy of sectarianism, the academies and colleges of the day presented a formidable obstacle to the establishment of any but classical schools. Though many undoubtedly recognized the inadequacy of scholastic education, few had the temerity to defend a more useful training. Of those who fought for the newer education, the name of the impoverished but militant Jonathan B. Turner outshines all the rest.

At that memorable Farmers' Convention meeting at Granville, Illinois, in September 1851, Turner suggested the plan of an industrial University in each state. The following March Turner announced for the first time the idea of national grants of land for the foundation and support of State Industrial Universities. It took eleven years to get this idea through Congress under what is known as The Morrill Bill.

This eleven year period of gestation that it took to enact this legislation was a stormy period. Into the fight, the enthusiastic Dr. Kennicott threw the full force of his persuasive personality and energy. His trenchant pen never dried, in his advocacy of the newer education. Several conventions were called in Illinois to discuss the merits of this new idea. Dr. Kennicott

was a most prominent and influential member as well as the chairman of most of the meetings. The Illinois Legislature was influenced to memoralize Congress. All over the country papers took up the "Illinois Idea" as did many legislatures. Dr. Kennicott spent much time lobbying in Springfield while the legislature was in session. On one such trip he had to borrow money from the governor to pay his bills and to buy a ticket home!

In 1857 Senator Morrill introduced this Land Grant Bill into the Senate. Kennicott made trips to Washington in the interest of this bill. I have records of his interviews with the log rolling, selfish members of Congress. Buchanan vetoed the bill. It finally became a law when Lincoln signed the act in 1862.

Sixty-nine colleges and universities have been benefited by this act of Congress. I have given some of the history of this legislation, first, because in my opinion, next to the act of 1787, this Land Grant Act stands as the greatest potential stroke for education ever enacted. Second, though the concrete idea was suggested by Turner and introduced into Congress by Morrill, its final enactment in my opinion was in a large measure due to that persistent, indomitable country doctor, John A. Kennicott.

In politics Dr. Kennicott was a Whig. In religion he was a liberal. There are no records that he ever attended church. Robert Collyer, the Unitarian preacher, officiated at an early funeral of one of the family. Dr. Kennicott was the father of five boys and two girls. All have passed away. It was my pleasure to know all except the two older boys. Kennicott's most noted child was Robert, a distinguished naturalist. The history of the classification of the fauna of this country can never be complete without mention of his work.

Dr. Kennicott was not above five feet five inches in height, and was very stoop shouldered. His face was seamed with deep lines. His eyes beamed with expression and flashed with each new thought. In any assemblage he would attract attention. He had the gift of friendliness and hospitality, but when occasion arose he could be a doughty opponent. He loved youth and youth turned to him with intuitive trust. He fought many battles for causes and for friends, but never for his own advantage. Geniality was one of his most marked characteristics. This is evident even in his grandchildren. Dr. Kennicott was a loyal friend. His innate courtesy and charm of manner made him approachable by all whom he chanced to meet. He had traveled much. He attended many public gatherings in his own state, and in other states. His home was a meeting place for leaders in the natural sciences and in medicine. His procedures were direct. He was as transparent as a child. There never was a doubt as to his convictions, and he hated double-dealing in others. The selfish ax-grinding politicians excited Dr. Kennicott's unmitigated disgust. He was an idealist who pursued realism.

Literally Dr. Kennicott died in his boots. Powell's history states that "a call was issued during the latter part of May, 1863, for the Sixth Industrial Convention to meet in Springfield, on June 9, 1863. This call was signed by twelve well known leaders, headed by the enthusiastic Dr. Kennicott." But the "Old Doctor" was not there to answer the call. He had passed away on June 4. On May 23, 1863, eleven days before his death, Dr. Kennicott wrote to his old friend Col. Hodge of Buffalo. Probably this was the last letter Kennicott ever wrote. It is so expressive that I shall give it:

"My dear old Friend: Are you still alive? I still live but scarcely breathe. For two months I have been at death's door with laryngitis complicated with heart disease, etc. and lately with rheumatic pains in the chest. Dr. Freer attended me first and I expect him and Dr. Brainard out tomorrow. It was thought I could not live, as I breathe with great difficulty, and often have to sit up 20 hours in the 24, as I suffocate if recumbent. The worst is I can't eat nor exercise. I now write for the first time in two weeks. I have been up since half past three A.M. I now write at six A.M. Very warm. Let me hear from you. I may suffer for this imprudence. But you and I should not neglect each other while we can hold a pen. I trust you do not suffer as I have of late. I have wished for death more than once, but I don't want to die if I have any chance of being comfortable again, and I seem to stand a heap of killing. Strange how much a man can live through. God be with you."

"Your old friend the Old Doctor."

As the years roll, as wealth increases, as urbanization of the prairies proceeds and the

haunts of the deer and other wild game are cut up by miles of hard smooth roads, I see a tendency to exaggerate the trials and vexations of the Pioneer Country Doctor. My father was a country doctor. My own professional life in a rural community reaches back nearly half a century. I have gone through the horseback, the two-wheeled cart and the buggy age of a country practice. Even so they were safer if not pleasanter hours than I now experience in going over the same territory in my car. In the early days I was summoned in person by a messenger whom I knew. I knew the people who desired my services. If I had any money in my pocket I never thought of leaving it when called out at night. The Pioneer Doctor never feared being robbed, kidnapped, or murdered when making a night call. I might get a leg scratched riding along a hedge row or my horse might stumble but that was nothing compared to being run into by a drunken driver nowadays. One could catch naps riding behind a faithful horse. I never dozed but once in my car. When I awoke I was in a ditch. I do not wish to minimize the hardships of the Pioneer Country Doctor for they were many. Nor do I desire to detract from the halo of glory and glamor that a generous posterity has accorded him, but as I see it human nature was the same in the early days as now. The problems of life were similar and are met today with the same spirit of helpfulness and earnestness of purpose—if not quite the fortitude—as in the days of yore.

SOME IMPORTANT USES AND ABUSES OF THE ELECTROCARDIOGRAM IN HEART DISEASE

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The main purpose of this paper is to point out certain abuses of this aid to diagnosis and to emphasize its value in the most common forms of heart disease. No attempt is made to cover the subject in its entirety.

It seems to me that an unfortunate situation exists in that diagoses are most often made by men who do not see the patient. There are two points of view to be considered in this regard. It is true that the present arrangement makes unprejudiced opinion possible. For certain conditions this is 100% satisfactory, as in the case of the diagnosis of the types of certain arrhythmias, the several kinds of heart block, and in the differentiation of the various types of dextrocardia.

However, it is generally conceded that clinical findings, a careful history, and other laboratory measures are indispensable for the proper evaluation of the electrocardiogram. That this is true is substantiated by the fact that probably more than 75% of the electrocardiographic findings in coronary disease may be duplicated in other conditions.

The ideal situation, which eventually must come, is for all doctors doing medical work to spend a little time and secure a working knowledge of the subject. He should use all the laboratory aids which we now have and he will be surprised at the ease with which he may familiarize himself with the rather limited nomenclature of the electrocardiogram. The movies shown you tonight illustrate what is being done to educate the general practitioner in electrocardiography, and shows the training in this subject received by our medical students.

Another, and a very important abuse, is that the electrocardiogram is all too often used to take the place of a thorough physical examination. As a result it is used to determine cardiac functional capacity, which should be determined by other more important tests and observations, and which is based only in part upon the electrocardiogram. This mistake leads to the undeserved criticism of the electrocardiographic diagnosis of myocardial damage (we might call this undeserved abuse heaped upon the electrocardiogram), because it does not fit in with the clinical picture. Electrocardiographic diagnosis of myocardial damage represents structural changes which impair cardiac function more or less, according to the degree of damage. Often, however, cardiac function is interfered with, more or less, according to the location of that damage. In evaluating electrocardiographic evidence, therefore, both of these variable quantities must be considered. One example is that in coronary thrombosis with infarction of the thin wall of the cardiac apex, the damage impairs cardiac function more seriously than does a similar area

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of infarction in the thick posterior wall of the left ventricle, yet T wave inversions may be the only sign in both instances. Another example is that marked widening and notching of the QRS complex in one case may indicate serious widespread myocardial damage, whereas, in another case it might only indicate localized injury to a branch of the ventricular conduction system and interference with cardiac function only in a limited way by comparison. These situations are differentiated by clinical examinaton, and by the use of other laboratory measures. It can be emphasized, therefore that cardiac functional capacity does not always parallel electrocardiographic evidence of damage.

A few examples of other abuses are illustrated by the following instances: An electrocardiogram showed evidence of acute rheumatic fever and the doctor in charge of the patient shook his head, frowned, and said: "Gosh, I hate to put him to bed as long as that will require." His attitude appeared to be that he was defending the patient against the electrocardiographic diagnosis. I should have considered it more helpful to the patient if he had said that the electrocardiographic information did or did not fit in with a clinical picture of active rheumatic fever, and whether or not it was correlated with other laboratory signs, or with the history, or with the physical examination.

Another doctor was concerned because the electrocardiogram of a patient did not show auricular hypertrophy, since the patient had mitral stenosis. This doctor expected the electrocardiogram to confirm his clinical diagnosis, whereas, it is known that less than one-third of the cases of mitral stenosis and regurgitation show electrocardiographic evidence of auricular hypertrophy, and those are in the later stages of the condition.

In another instance an electrocardiogram was diagnosed coronary thrombosis and as a result the patient was refused a life insurance policy for a considerable amount. This electrocardiogram had been taken with the arm lead electrodes reversed, and the excellent cardiologist who made the diagnosis didn't notice the error and based his opinion upon inverted T waves in the first lead. The last I heard of this situation was that the patient grew too old to be insurable while waiting for the insurance company to give him a clean bill of health.

There are other abuses of this invaluable laboratory procedure and I am sure that many of you have had interesting experiences of your own. However, in spite of all these failures, electrocardiography is becoming more and more important and I believe that some day it will become as routine a measure as the blood count and urinalysis.

The electrocardiogram is useful in all phases of the management of heart disease. In diagnosis, mention has been made of its value in certain types of arrhythmias, heart block, and dextrocardia. Primarily, the electrocardiogram is of value in determining the presense or absence of heart disease. I repeat that it is an aid to clinical diagnosis and not a court of last resort to be appealed to for the name to be applied to the type of heart disease which is had by the patient. In syphilitic heart disease, in hypertensive heart disease, and in thyroid heart disease electrocardiographic evidence is not characteristic. It is true that auricular fibrillation is often found in hyperthyroidism, but it is by no means exclusively associated with that type of heart disease. Of course, mention must be made of the value of the electrocardiograph as a research instrument.

Rheumatic fever lays the foundation for more than half the cases of heart disease, while arteriosclerosis accounts for about 25%. I shall confine my remarks about the use of the electrocardiogram to these two types of heart disease and especially in the early stages of rheumatic heart disease.

The early diagnosis of rheumatic heart disease is imperative if we ever expect to diminish the mortality from heart disease. In its pure form rheumatic fever is encountered most often in children between the ages of five years and on up to young adult life. The vagueness of the clinical signs make it important that every diagnostic aid be used to the uttermost. It is here that the electrocardiogram serves one of its most important and most sadly neglected functions. Associated with primary attacks of rheumatic fever at about the time of, and often before an indefinite or suspected heart murmur occurs, the electrocardiogram may show evidence of this disease. Some of these changes are transitory (as in the case of J. A., who had a prolonged PR interval following an acute polyarthritis at the age of 17). With prolonged bed-rest, the PR interval

returned to normal many weeks after the clinical symptoms had disappeared. Cardiac irritability was not markedly pronounced, sedimentation rate was normal, a systolic murmur loudest in the pulmonic area was very faint, and with the boy feeling perfectly well he was unable to understand why he was confined to bed for so long. With the tangible proof afforded by the electrocardiogram in this case, clinical judgment was reenforced and full cooperation was more easily secured. While it is true that more simple infections are reported to be associated with similar electrocardiographic changes, and while such instances often do not produce permanent cardiac damage, the possibility of dealing with heart disease of infectious origin, i.e., non-rheumatic, is sufficiently important to warrant treatment upon the same basis as if it were rheumatic heart disease.

Other electrocardiographic changes associated with rheumatic fever are slurring of the QRS wave, elevation or depression of the ST interval, and upright cove shaped as well as inverted T waves. All of these changes are seen in the ordinary three leads. These are not specific, yet I would call your attention especially to the ST interval deviations. Later you will be shown how these changes represent "Current of Injury" due to heart muscle damage. For about four years I have been observing slight ST interval deviations in the three ordinary leads, in people afflicted with rheumatic heart disease. It finally has been forced upon me that in most instances this change represents injury to heart muscle in children just as much as it does in the adult with coronary occlusion. The exceptions to this rule may be in the case of digitalis administration, or with marked long standing, or severe valvular defects, or with marked tachycardia, or in other conditions which change cardiodynamic balance. While they may be exceptions, I believe that those conditions produce a current of injury to cardiac musculature, just the same as in rheumatic heart disease or in coronary disease. The difference is that the injury takes place less abruptly by the gradual stretching of the heart muscle cells, or by unnatural work strain on the heart muscle cells in contradistinction to the active inflammatory condition of the heart muscle in certain cases of rheumatic and infectious heart disease and the ischemia or anoxemia in coronary disease.

In a recent study of 52 control cases it was found that the ST interval in the fourth lead was elevated in the normal new-born and that the T wave was upright. At about 12 or 16 years of age most children have an iso-electric or depressed ST interval and an inverted T wave in lead four. In another study of 19 children under 16 years of age with symptoms suggestive of rheumatic fever but before a demonstrable valvular lesion occurred (that is, in the pre-endocarditis stage of rheumatic fever), these changes take place earlier than usual.

In a third study of 118 patients up to 16 years of age and with frank rheumatic heart disease and with varying grades of mitral stenosis and regurgitation and cardiac hypertrophy, it was found that there was a reversal of the trend observed in the suspect pre-endocarditis group. With cardiac hypertrophy and mitral stenosis the fourth lead retains the characteristics of that observed in the new-born. It might have been that the electrocardiogram went through the usual changes and then returned to the type observed in the new-born, with an upright T wave and an iso-electric or elevated ST interval in the fourth lead.

The explanation for this observation, I suspect, is that mitral stenosis results in a train upon or hypertrophy of the right ventricle. Newborns have a relative hypertrophy of the right ventricle or underdevelopment of the left ventricle which persists from three to four years. I feel that observations in this young age group is rather trustworthy because these children have not lived long enough to have complicating factors which would give a mixed etiology for the change. I feel that a tangible sign similar to the one described is of value in aiding the diagnosis of this most important type of heart disease.

These observations are reported to you in order to bring to you a new application of old electrocardiographic signs. I would again emphasize that most of the abnormal electrocardiographic findings discussed are merely signs of myocardial damage and not characteristic of rheumatic heart disease specifically. They are strong evidence in favor of its existence in the presence of suspicious clinical history and physical findings.

The great value of the electrocardiogram in the diagnosis of arteriosclerotic heart disease is widely known. The more clear cut the clinical

picture, the more definite are the electrocardiographic signs. Now, however, many instances of symptomless coronary thrombosis are being reported. It is only recently that we have satisfied ourselves that angina pectoris in most instances is due to inadequate blood supply through the coronary arteries. In a recent study of 888 cases of angina pectoris and arteriosclerotic heart disease, 79% were found to have had electrocardiographic findings compatible with coronary disease. Fifty-nine per cent. of these (526 cases) had that evidence in the three ordinary leads. Twenty per cent (182 cases) had that evidence in the recently used fourth or chest lead.

The electrocardiographic diagnosis of coronary disease is based upon five cardinal points: 1. Prolonged PR interval and higher grades of heart block indicating damage of the septum somewhere between the auricles and ventricles. 2. Widened QRS complex, indicating damage to the ventricular musculature. 3. Widened or prominent Q waves as described by Wilson. 4. Deviation of the ST interval above or below the base line, indicating "Current of Injury" to the ventricular musculature, and 5. T wave inversions which also indicate ventricular damage. These changes may be of all degrees, pronounced, or minimal.

Often electrocardiographic evidence appears early and disappears promptly. These cases may be associated with spasm of coronary arteries and leave no electrocardiographic sign. In other instances electrocardiographic signs may appear late, as in cases of slowly progressing thrombosis. In all cases signs may appear in one lead before they do in another. It has been frequently observed that the fourth lead changes occur earlier in cases of infarction of the anterior wall of the left ventricle and that the ordinary leads show changes earlier when posterior wall infarctions occur. In doubtful cases several electrocardiograms may be needed to secure evidence in order to confirm the diagnosis.

An interesting observation has been made (A. R. Barnes of Mayo's) in the study of coronary thrombosis, and this has been that with single infarctions of the apex or anterior wall of the left ventricle the T waves in leads one and two are inverted. The prognosis of this type is said to be less favorable than when an infarction of comparable size takes place in the posterior wall of the left ventricle. This latter type is differentiated from the former by having the T waves inverted in leads two and three.

In coronary thrombosis a very important bit of knowledge is to be gained by the use of electrocardiograms to follow the course of healing of the area of infarction. In small areas the electrocardiogram can be seen to return to normal. In these circumstances we may be guided in our advice to the patient regarding the restriction of his activity. It should again be emphasized that this information acts as an aid to the clinical observations on the patient.

It should be mentioned also that the electrocardiogram is of further value in the treatment of patients with all types of heart disease. A very helpful instance is that of electrocardiographic signs of over-digitilization. These are: 1. Depressed ST intervals. 2. Coupled beats. 3. Various grades of heart block, and 4. Various types of tachycardias. These signs are of special benefit in the treatment of elderly people with advanced heart disease of mixed etiology and with greatly enlarged hearts. They do not tolerate large doses of digitalis.

In prognosis, the electrocardiogram is also helpful. When considering the site of origin of tachycardias it is known that those of ventricular origin are more serious than those which arise above the ventricles in the A-V node or in the auricles. Mention was made about the poorer prognosis of infarction of the anterior wall as compared with that of the posterior basal portion of the left ventricle. It is also true that the electrocardiogram gives evidence of cardiac infarction over widespread areas as compared with those of limited area. These have, occurring simultaneously, more of the signs mentioned above and the individual signs may be more pronounced. In this way the existence of spreading of the infarcted or insufficiently nourished area may indicate that the prognosis is getting grave; whereas, if the healing process is depicted by the return of the electrocardiogram to normal, the prognosis, of course, is good.

It must be mentioned that the electrocardiographic signs found in many types of heart disease are similar to each other and are differentiated by the use of clinical judgment. You have been shown that the ST interval deviations and T wave changes mean most commonly: 1. Coronary disease with infarction of the many degrees

of damage that variations of this condition may produce; or 2. Myocarditis due to rheumatic fever or other infection. 3. They may mean digitalis effects. 4. They may also be found in the presence of aortic regurgitation with and without mitral stenosis, and 5. In certain congenital cardiac conditions. It is also very important to know that four extracardiac conditions may cause similar changes. These are pulmonary embolism or thrombosis, spontaneous pneumothorax, and pericardial effusion. The shock and physical findings in these conditions often make differentiation rather difficult.

Some people stress the desirability of periodic electrocardiograms and they may have their value. Certainly it must be admitted that the electrocardiogram does give evidence of myocardial damage, and that it gives this evidence in a tangible way. I don't see how a case of suspect heart disease can be properly analyzed without one. Certain types of changes, as you have seen, are associated with certain types of heart disease. It is hoped that the discussion of these relationships will demonstrate the value of associating several etiological factors with these various electrocardiographic findings, and thereby facilitate the proper correlation of the clinical picture, permitting accurate diagnosis, proper treatment, and result in a lower mortality from heart disease.

A TROCAR WITH PERFORATIONS

MEYER M. MARBEL, M. D.
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The illustration is of an abdominal trocar with multiple perforations on the sides of its cannula. Rows of perforations were made on four sides to about two inches from its open end. Whenever a sudden stoppage to the ascitic flow takes place during an abdominal paracentesis on account of blockage by an abdominal viscus, all one does it to push the cannula about one inch deeper down intra-abdominally and the flow is promptly reestablished through the side perforations on the cannula without disturbing the patient by turning him. Its use has proved to be very satisfactory, much more than a cannula without perforations, when tried on cases.

The following might be of interest: Several old trocars that have seen service for ten or fifteen years have been taken to some surgical instrument house to have perforations made on every cannula, so as to have a variety of sizes as the first one has shown satisfactory use after several trials. Some of the attendants expressed great satisfaction with this new or original change in the abdominal trocar, as they have never seen such improvement in this instrument. To substantiate their statement, they produced various catalogs from foreign countries where the foremost surgical instrument makers have not had for decades abdominal trocars with perforations among the numerous illustrations of their highly decorated and oversized catalogs.

From the top floors of the building, an elderly gentlemen came down, past seventy years old, who has been making doctor's instruments since his boyhood days, and at present is compiling a history of doctors' instruments, so they say. His Van Dyke beard, his cutaway clothes, and his general appearance reminded one much of the

Fig. 1—The ordinary abdominal trocar generally used and has only one main opening. When many openings were made on its canula for about two inches from its open end blockage of the ascitic flow has not happened again, turning of the patient was unnecessary, nor was it necessary to do a second parecentesis at some other point and the abdominal fluid was fully drained in a shorter time without any extra effort on the part of the attending doctor.

Fig. 2—The Ochsner gall bladder drain on which canula perforations were made and served as a handy abdominal trocar with a good grip, leaving a small quickly healing wound after the weekly abdominal tappings.

N. B.—The perforated abdominal trocar should not be confused with other perforated drain instruments such as the tonsillar aspirating attachment or the suprapubic bladder drain or the brain or peritoneal aspirators, as they have sometimes patent main opening.

late Professor Doctor Paul Erlich, discoverer of 606. He said that he had never seen anything like it. But . . . "Someone must have thought of it years before" . . . The simplicity of the change, the sage thought, is the greatness of its usefulness. Finally it was decided to describe this illustration in public prints; perhaps through this medium we may locate its first possible originator, provided such improvement has ever been published by anyone in years gone by. If priority can thus be established, this instrument with its improvement shall bear the name of its first originator and credit him to whom credit is due. Should there be no reply within three years from date of this publication on improvement in abdominal trocar, it shall become public property for the benefit of patients and doctors. Just another trocar, one-half of which is perforated.

MORTALITY STATISTICS OF INJECTION WITH NEOARSPHENAMINE AND INJECTION OF VARICOSE VEINS

The mortality statistics of neoarsphenamine injections as compared with fatalities following the injection treatment of varicose veins are difficult to interpret. The arsphenamine mortality has been analyzed by Stokes (Modern Clinical Syphilology, ed. 2, Philadelphia, W. B. Saunders Company, 1934). He gives the following summary of statistics:

Year	Author	Infections
1910-1913	Leredde and Jamin	1:3,777
1911-1914	Nichols	1:5,000
1914-1918	British Base Hospital No. 39	1:8,000
1917-1919	Guy (United States Army)	1:12,500
1920	Meirowsky (European statistics)	1:11,289
1920	Meirowsky arsphenamine	1:13,000
1920	Meirowsky neoarsphenamine	1:32,550
1920	Meirowsky death rate under 0.6 Gm.	1:162,800
1920	Meirowsky death rate over 0.6 Gm.	1:3,000
1916-1924	Section of Dermatology (Mayo Clinic)	1:21,000
1919-1927	United States Navy	1:17,526
1925-1931	University of Pennsylvania	1:33,600

The average risk of death (avoidable and unavoidable) ranges according to these figures between 1:7,000 and 1:11,000.

The unavoidable risk of death ranges between 1:56,000 and 1:162,000. Good performance is estimated by Stokes at from 1:15,000 to 1:35,000, depending on material, system and dosage.

It is difficult to differentiate between avoidable and unavoidable deaths. The administration of arsphenamine to a patient with an obvious contraindication may result in death not from the drug but from its improper use.

The mortality statistics from varicose vein injections have never been submitted to such a searching scrutiny as those due to arsphenamine. McPheeters reported a death rate of approximately 1:5,000; Kettel estimated the total mortality as 1:3,000. It must be emphasized that these figures represent the number of patients and not the number of injections.—*J. M. A.*

COBRA VENOM STOPS PAIN BUT IS NOT HABIT-FORMING

Cobra venom, in doses too small to be poisonous, relieves pain as effectively as morphine. But the venom of the death-dealing serpent is not habit-forming when given to relieve pain, as morphine is, and it does not produce the disagreeable and dangerous by-effects of the narcotic drug.

Experiments with cobra venom on laboratory animals and human patients, including a hundred sufferers from cancer in its late stages, were reported by Dr. David I. Macht, director of Pharmacological Research Laboratory, Hynson, Westcott and Dunning, Baltimore, at the meeting of the National Academy of Sciences. Dr. Macht was formerly lecturer in pharmacology at the Johns Hopkins Medical School.

Seventy-five of the cancer sufferers had their pain relieved by doses of cobra venom injected into the muscles, Dr. Macht reported.

The snake venom checks pain by acting on the higher nerve centers in the brain, he found from psychological and pharmacological studies.—*Science News-Letter.*

DIOXYANTHRANOL 1-8 AS A SUBSTITUTE FOR CHRYSAROBIN

Herman Beerman, Philadelphia; George V. Kulchar, San Francisco; Donald M. Pillsbury and John H. Stokes, Philadelphia (*Journal A. M. A.*, Jan. 5, 1935), find that dioxyanthranol 1-8, which may be considered as chrysarobin without the methyl group, is an effective drug and a desirable substitute for chrysarobin in conditions in which chrysarobin has heretofore held the field. It is usable in low concentrations (from 0.1 to 1.0 per cent), and when thus employed gives rise to no constitutional symptoms, does not produce extensive dermatitis, produces comparatively little discoloration of the clothing, and may be used on the scalp without serious discoloration of the hair and on the face without producing conjunctivitis. The European literature on this drug is extensive, in general favorable, and in such extensive reports as those of Kromayer (600 cases), enthusiastic. The authors' experience with it indicates that it produced involution of inveterate psoriasis when a wide variety of other forms of treatment, including that with chrysarobin, had failed. This is especially true of psoriasis of the scalp. In a series of fifty patients unaffected by previous treatment over a long period of time, 82 per cent had good results averaging 60 per cent involution or better, within from one week to four months, and 46 per cent were completely cleared within this period. Seven relapses observed indicate that treatment should be prolonged considerably beyond the disappear-

ance of the last lesion for the most lasting effect. Mild dermatitis, mild folliculitis and slight pigmentation are produced occasionally. No albuminuria and no conjunctivitis were observed. Pruritus, associated with psoriasis, was relieved in a number of cases. In fungous infections of the skin the effect of the drug is second to that in psoriasis, according to European authors. In alopecia areata, pityriasis rosea, sycosis barbae (superficial), seborrheic processes and a variety of other conditions favorable results have been reported. Its action on the mycoses and alopecia areata is favorable. Dioxyanthranol 1-8 is not proposed as a new drug nor one completely free from the objections familiar in the use of chrysarobin. It is none the less, the authors believe, a superior substitute which deserves greater popularity now that it is available in this country.

Society Proceedings

COOK COUNTY
CHICAGO MEDICAL SOCIETY

Wednesday, March 4, 1936

ANESTHESIAS

Inhalation Anesthesia: Volatile ether — Divinyl ether; Gaseous—nitrous oxide; Ethylene; Cyclopropane; including intratracheal administration—Ralph M. Waters, A. M., M. D., Prof. of Anesthesia, University of Wisconsin.

Intravenous—Evipal Sodium; Panothal Sodium.

Rectal—Colonic ether; Avertin.

Regional Methods—Spinal, Sacral, Cervical. Preliminary medication for each agent and method will also be discussed—John S. Lundy, A. B., M. D., Professor of Anesthesia, Mayo Foundation, University of Minnesota Graduate School.

Discussion—Arno B. Luckhardt, M. D., Emil Ries, M. D., Isabella C. Herb, M. D., Paul B. Magnuson, M. D., Eric Oldberg, M. D., Frederick Lieberthal, M. D.

Wednesday, March 11, 1936

Symposium on Cancer of the Colon and Rectum:

Early Diagnosis—Leon Bloch.

Surgery of the Colon—Vernon David.

Surgery of the Rectum—Charles B. Puestow.

Discussion—Fred M. Drennan, Clement Martin, Carl B. Davis, Karl Meyer, Siegfried Strauss.

Wednesday, March 18, 1936

Symposium on Arterial Diseases of the Extremities:

Symptomatology and Diagnosis: Arteriosclerosis, Thermic Gangrene—Diabetes, Bueger's Disease, Raynaud's Disease—Samuel Perlow.

Conservative Therapy—Frank V. Theis.

Surgical Therapy — Sympathetic Ganglionectomy, Embolectomy, Peripheral and Paravertebral Nerve Block, Intraspinal Alcohol, Amputation—G. de Takats.

Discussion—Carl W. Apfelbach, Robert Keeton, Adrien Verbrugghen.

Marriages

EDGAR L. AABERG, Peoria Heights, Ill., to Miss Jean Littlejohn of Springfield in December, 1935.

JAMES T. BLAKELY to Mrs. Helen Vernon Fawley, both of Fairfield, Ill., in Paducah, Ky., January 19.

WILLIAM M. COVODE, Chicago, to Miss Eleanor Lindquist of Webster, Wis., February 20.

Personals

Dr. Ernest A. Pribram, Chicago, addressed the Will-Grundy County Medical Society, March 11, on "Blood Transfusion."

At a meeting of the Union County Medical Society, March 12, Dr. Edward J. Stieglitz, Chicago, discussed "Nephritis—Functional Considerations in Treatment."

At a meeting of the Chicago Roentgen Society, March 12, speakers included Drs. Dallas B. Phemister on "Calcium Carbonate in Cholelithiasis."

Dr. Nathaniel G. Alcock, Iowa City, addressed the Peoria City Medical Society, March 3, on "Malignancy of the Urinary Tract."

Dr. Harry E. Mock, Chicago, discussed skull fractures before the Whiteside County Medical Society in Sterling, February 20.

Dr. James H. Hutton, Chicago, addressed the Champaign County Medical Society, February 13, on "Gland Therapy and Hypertension."

Dr. Martin F. Engman, St. Louis, discussed the subject of eczema before the Madison County Medical Society, Granite City, February 7.

Dr. Leon Unger, Chicago, among others, addressed the Will-Grundy Medical Society, February 19, on "Recent Advances in the Study of Allergic Conditions."

At a meeting of the Chicago Society of Internal Medicine, February 24, Dr. Edmund Jacobson, among others, spoke on "The Influence of Skeletal Muscle Tension on Blood Pressure."

Dr. Chauncey C. Maher, Chicago, discussed "Hypertensive Vascular Disease" before the Adams County Medical Society in Quincy, March 9.

Dr. Isaac A. Abt, Chicago, discussed "Management of the Infant During the First Three Months of Life" before the Decatur Medical Society, February 18.

Dr. Jerome R. Head, among others, addressed the Chicago Pediatric Society, February 18, on "Posture in the Etiology, Prophylaxis and Treatment of Diseases of the Lung."

Dr. Russell D. Herrold discussed "Environmental Altered Gonococcal Forms and the Probable Mechanism of Cure in Gonorrhea," among other speakers before the Chicago Urological Society, February 27.

Dr. Hugh Cabot, Rochester, Minn., delivered the eighth annual Stephen Walter Ranson Lecture at Northwestern University School of Medicine, February 25, on "The Changing Practice of Medicine."

The Chicago Laryngological and Otological Society was addressed, March 2, by Dr. Louis Z. Fishman on "Bilateral Spastic Adductor or Flaccid Abductor Paralysis of the Larynx."

Dr. Earl R. Carlson, New York, addressed a joint meeting of the Jane A. Neil Club and the Chicago Orthopaedic Society, March 4, on "Treatment of the Spastic Child."

Dr. Anton J. Carlson gave an address at a meeting of the Cook County League of Women Voters in the Palmer House, March 14, entitled "Buyers Beware! The New Food and Drug Act: A Test in Consumer Effectiveness."

At a meeting of the LaSalle County Medical Society in LaSalle, February 26, speakers were Drs. Edward A. Roling, Chicago, on "Eye Conditions of Interest to the General Practitioner"; Tell Nelson, Chicago, "Diagnosis of Allergic Conditions," and Edward G. Tatge, Evanston, "Allergy in General Practice."

Dr. Charles C. Higgins, Cleveland, addressed the Chicago Urological Society, March 26, on "Experimental Production and Solution of Urinary Calculi with Clinical Application and End Results."

The Chicago Pathological Society was addressed, among others, March 9, by Noel Paul Hudson, Ph.D., Columbus, Ohio, and Enid A. Cook, A.B., of the department of bacteriology, University of Chicago, on "Relation of the Herpes Antiviral Power of the Blood to Sex, Pregnancy and Menstruation."

At a meeting of the Chicago Ophthalmological Society, March 16, Dr. Edward V. L. Brown spoke on "Apparent Increases in Hyperopia Up to the Age of Nine," and Drs. Thomas D. Allen and Sanford R. Gifford discussed "Surgical Treatment of Retinal Detachment."

Among others, Dr. Henry W. Meyerding, Rochester, Minn., discussed "Dupuytren's Contracture" before the Chicago Orthopaedic Society, March 13. Dr. Roger Anderson, Seattle, discussed a paper presented by Dr. James J. Callahan on "Fractures of the Patella."

Speakers before the Chicago Gynecological Society, March 20, include, among others, Drs. George H. Rezek on "A Biological Test for the Diagnosis of Intra-Uterine Fetal Death" and Harold H. Hill, Oak Park, "Value of the Sturmdorff Cone for Biopsy Material in the Detection of Early Carcinoma of the Cervix Uteri."

Mr. Harold Baker, East St. Louis, discussed "The Harrison Narcotic Act" before the St. Clair County Medical Society in East St. Louis, March 5; speakers at the March 4 meeting in Belleville included Drs. Robert S. Berghoff and Clayton J. Lundy, Chicago, on "Diagnosis and Treatment of Heart Disease" and "Electrocardiogram in Early Diagnosis of Arteriosclerotic Heart Disease" respectively.

The Chicago Society of Allergy was addressed, March 16, by Drs. Milton B. Cohen, Cleveland, and Karl D. Figley, Toledo, on "Changes in Growth, Maturity and Mineralization Associated with Allergy" and "Iodized Oil in Intractable Asthma" respectively. Dr. Isadore Pilot discussed "Urticaria Due to Witte's Peptone."

The Chicago Tuberculosis Society was addressed, March 13, by Drs. Frederick Lieberthal on "Urinary Tuberculosis—Its Relation to the Tuberculosis Problem in General"; Thomas O. Nuzum, Janesville, Wis., "Intrathoracic Fluid," and Jay Arthur Myers, Minneapolis, "Tuberculosis Lesions in Medical Students and Nurses."

Dr. Roy R. Grinker, head of the division of psychiatry at the University of Chicago, has resigned to become chairman of the department of neuropsychiatry at Michael Reese Hospital. In accordance with plans of the hospital for the development of investigative interest in nervous and mental diseases, clinical and laboratory facilities for research in neuropsychiatry are to be opened for Dr. Grinker's purpose. Applica-

tion for a research fellowship in neuropsychiatry beginning July 1 should be made to him.

Dr. Max Thorek has been made a corresponding member of the Society of Medical Sciences of Lisbon, Portugal.

Dr. Louis W. Sauer, Evanston, Illinois, presented a paper on "Whooping-cough" before the Kankakee County Medical Society in Kankakee, March 12.

Dr. Paul C. Schnoebelen, St. Louis, addressed the Madison County Medical Society on the subject of "The More Common Bone Tumors" and Dr. Leith Slocumb on the subject of "Rectal Diseases and Their Treatment," March 6, 1936, at the Louis Latzer Memorial Library, Highland, Illinois.

News Notes

—In 1935 there were 10,085 deaths attributed to heart disease, as compared with 9,654 in 1934. These totals, based on statistics reported by the Chicago Heart Association, compare with 35,424 deaths from all causes in 1935 and 36,282 in 1934.

—Health directors and sanitary engineers representing Illinois, Iowa, Minnesota, Missouri and Wisconsin attended a meeting in Chicago, March 10, to consider a program of stream pollution abatement in the upper Mississippi drainage basin. State health directors in each of the states named have signed an agreement to cooperate in this program.

—The sixth annual tumor clinic will be held at the Veterans' Administration Facility-Edward Hines Jr. Hospital, Hines, April 9. The clinic will begin at 2:30 in the afternoon, under the direction of Dr. Max Cutler, Chicago, and staff officers of the tumor clinic of the hospital. Following dinner in the evening, Dr. Gordon B. New, Rochester, Minn., will be the guest speaker.

—Dr. Alfred J. Kobak discussed "Maternal Deaths from Abortion in 1934" before a meeting of the maternal welfare committee of the Chicago Gynecological Society, February 18. Speakers before the Chicago Gynecological Society, February 21, included Drs. Garwood C. Richardson on "Significance of the Fetal Heart Tones and Uterine Firmness in Abruptio Placentae"; Clyde J. Geiger, "Benign and Malignant Polyps of the Cervix Uteri," and Marshall W. Field, "Spontaneously Occurring Painless Labor in the Absence of Neurologic Diseases."

—Cook County Hospital cared for 69,891 patients during 1935; although the normal daily capacity of the hospital is 2,600, a daily average of 2,619 was maintained by placing beds in hallways and opening two new floors in the children's ward which provided 190 additional beds. The number of persons who died in the hospital was 6,650. There were 82,721 patients turned away from the hospital; of these 25,284 received first aid treatment.

—The Chicago Hospital Council was recently organized to work out a program of group hospital insurance, newspapers report. Hospitals that have joined the council are Augustana, Berwyn, Garfield Park, Community, Bethany, Grant, Henrotin, Holy Cross, Home for Destitute Crippled Children, St. Anthony de Padua, Little Company of Mary, Lutheran Deaconess, Michael Reese, Mount Sinai, St. Bernard's, St. Joseph, St. Luke's, University of Chicago Clinics, including Billings Memorial, Bobs Roberts Memorial and the Max Epstein clinics; Women's and Children's Hospital, and Woodlawn.

—A survey of visual conditions in public schools in Chicago is under way, under the auspices of the board of education, as a project of the works progress administration. The eyesight of all children will be tested. The Illinois Society for the Prevention of Blindness is supervising the making of the tests. Children whose vision falls below 20/70 will be required to have an examination by an ophthalmologist. Members of the Chicago Ophthalmological Society who will assist in making the examinations are requested to consider this work as a partial charity since it is primarly for the underprivileged. Rates have been fixed for patients able to pay a fee, and free choice of physician is urged.

—A special program of lectures and demonstrations in medicine will be held under the direction of The Mayo Foundation from April 6 to 10, inclusive. Mornings will be devoted to surgical and medical clinics. In the afternoons and evenings, in addition to clinico-pathologic conferences, symposiums will be conducted on various phases of gastroenterology, urology, acute and chronic empyema, vascular diseases of the extremities, hypertension, orthopedics, and oral plastic surgery.

—The University of Illinois announces that in the College of Medicine a new department of Neurology and Neurological Surgery has been created and Dr. Eric Oldberg has been appointed Professor and Head of this new department. This action was taken at a recent meeting of the Board of Trustees. Dr. Oldberg has been Acting Head of Surgery since the death of Dr. Carl A. Hedblom.

Dr. Warren H. Cole of the Department of Surgery of Washington University, St. Louis, has been appointed Professor and Head of the Department of Surgery to succeed Dr. Hedblom.

Both of the above appointments will begin September 1, 1936.

Deaths

HENRY PATTERSON BAGLEY, Galesburg, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1905; a Fellow, A. M. A.; at various times associate, and instructor in laryngology and otology, Rush Medical College, Chicago, and assistant professor of ear, nose and throat diseases at Loyola University School of Medicine, Chicago; served during the World War; formerly on the staffs of the Chicago Eye, Ear, Nose and Throat Hospital, St. Mary's of Nazareth Hospital and the Illinois Charitable Eye and Ear Infirmary, Chicago; aged 59; on the staff of the Galesburg Cottage Hospital, where he died, February 8, of pneumonia.

FREDERICK AUGUST BAUMGART, Danville, Ill.; College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1904; a Fellow, A. M. A.; past president of the Vermilion County Medical Society; on the staffs of the Lakeview Hospital and St. Elizabeth Hospital; aged 61, died; January 15, of angina pectoris.

JACOB WENDELL CLARK, Chicago; Rush Medical College, Chicago, 1899; served during World War; aged 57; died January 30, of coronary thrombosis.

CHARLES E. COLWELL, Aurora, Ill.; Hahnemann Medical College and Hospital, Chicago, 1885; a Fellow, A. M. A.; past president of the West Aurora School Board; on the staff of the Copley Hospital; aged 71; died, January 10, of angina pectoris.

VESSELIUS DAVIS, Wapella, Ill.; Western Reserve University Medical Department, Cleveland, 1882; aged 76; died, Dec. 20, 1935, of arteriosclerosis.

CLARENCE ALFRED HANSON, *Chicago;* Loyola University School of Medicine, Chicago, 1926; member of the Illinois State Medical Society; aged 39; died, January 21, of coronary thrombosis.

GEORGE OSCAR HULICK, East St. Louis, Ill.; American Medical College, St. Louis, 1902; a Fellow, A. M. A.; formerly professor of obstetrics at his alma mater; past president of St. Clair County Medical Society; aged 59; died, February 3, of myocarditis.

WILLIAM BRADBURY MCCLURE, Evanston, Ill.; Johns Hopkins University School of Medicine, Baltimore, 1912; a Fellow A. M. A.; house officer, Harriet Lane Home for Invalid Children, Johns Hopkins Hospital, 1912-1913; assistant resident and resident physician Children's Memorial Hospital, Chicago, 1913-1915; instructor in pediatrics, State University of Iowa College of Medicine, Iowa City, 1915-1916; associate in pediatrics, Northwestern University Medical School, since 1930; attending pediatrician, Evanston Hospital, since 1918 and associate physician since 1930; attending physician to the Children's Memorial Hospital, Chicago, since 1929; fellow, at one time director, associate member, and member of the Otho S. A. Sprague Memorial Institute Laboratory for Research of the Children's Memorial Hospital; served during the World War; member of the American Pediatric Society and the American Academy of Pediatrics; contributed to pediatric textbooks and to the periodical literature; aged 51; died, February 13, of hypertensive cardiovascular disease and acute angina pectoris.

GEORGE GANSEY O'CONNELL, *Chicago;* Rush Medical College, Chicago, 1908; member of the Illinois State Medical Society; aged 50; died, Nov. 23, 1935, of hemiplegia, hypertension, arteriosclerosis and mitral stenosis.

CHARLES WICKHAM PARKER, Chicago; Eclectic Medical College of the City of New York, 1882; Rush Medical College, Chicago, 1893; aged 81; died Dec. 30, 1935, of carcinoma of the rectum.

SUMNER J. RICKER, Aurora, Ill.; Hahnemann Medical College and Hospital, Chicago, 1871; a Fellow, A. M. A.; College of Physicians and Surgeons of Chicago, 1891; aged 88; died suddenly, January 4, of heart disease.

HARRIS ELLETT SANTEE, Chicago; University of Pennsylvania Department of Medicine, Philadelphia, 1892; member of the American Association of Anatomists; professor of anatomy, College of Physicians and Surgeons of Chicago, School of Medicine of the University of Illinois, 1900-1910; professor of nervous anatomy, Chicago College of Medicine and Surgery, 1910-1917; author of "Anatomy of Brain and Spinal Cord"; aged 71; died, February 28, in the West Side Hospital, of chronic bronchitis and myocarditis.

OTTO WILLIAM STAIB, Barlett, Ill.; College of Physicians and Surgeons of Chicago, 1888; a Fellow, A. M. A.; aged 78; died, January 9, of coronary thrombosis.

DANIEL PATRICK TETER, Chicago; Baltimore Medical College, 1889; on the staffs of the Swedish Covenant Hospital and the Martha Washington Hospital; at one time medical warden at the Cook County Hospital; aged 69; died, January 9, of coronary thrombosis.

ROLLAND VINCENT TURNER, Aurora, Ill.; State University of Iowa College of Medicine, Iowa City, 1925; member of the Illinois State Medical Society; aged 37; died, January 23, in the Misericordia Hospital, Milwaukee, of Addison's disease.